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ABSTRACT

This report describes the Experimental Schools Project (ESP) conducted by the Franklin Pierce School District in Tacoma, Washington, under funding from the National Institute of Education. The ESP was a five-year program designed to provide the optimum learning environment for each student. Each of the district's 13 schools attempted, through initial placement and continuous evaluation and monitoring, to provide each student with the most appropriate curriculum delivery system and learning environment possible. The report does not offer a formal evaluation or study of the ESP, but rather describes the history of the project and some of its accomplishments. (JG)

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FINAL REPORT

EXPERIMENTAL SCHOOLS PROJECT

Franklin Pierce School District
315 South 129th Street
Tacoma, WA 98444
January 1977

EA 010 259

A USOE/NIE Project
funded under USOE
grant OEG-0-71-3464
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THE EXPERIMENTAL SCHOOLS PROJECT
A SUMMARY

For five years the Franklin Pierce School District took part in an Experimental Schools Project designed to "create an appropriate environment for optimum learning for each child." This document is a narrative report of what occurred during that period of time.

This is not meant to be a research document nor an evaluation of the project in the Franklin Pierce district. Its purpose is to report some of the major activities. Conclusions will have to be those of the reader, for the most part.

The project has been characterized as a gigantic experiment in learning, not only for the student but also for the district and its personnel.

The original project involved just under half the district's 13 schools. While the project plan called for a number of changes--like individualized instruction, teacher training and wide-ranging curriculum development, it was not very long before teachers and administrators discovered that you can't do it all at once. That perhaps was lesson number one.

But learning for students is the prime purpose of any school district activity, federally funded or otherwise. And students in the Franklin Pierce schools have learned, though perhaps not what they and their teachers thought they would learn.

Student Achievement

As a result of testing the achievement of nearly every student from grades 2-11 over a four-year period, administrators found a general improvement in the basic skills of reading, language and mathematics. The improvement was significant at the secondary level.

Change in Achievement Scores 1972-76

GRADE	READING	LANGUAGE	ARITHMETIC	TOTAL BATTERY
2	+.1	-.1	+.1	+.1
3	+.1	-.1	+.1	0
4	+.1	+.1	+.1	+.2
5	-.1	+.3	+.1	0
6	+.1	+.2	+.4	+.3
7	+.6	+.6	+.2	+.4
8	+.6	+.6	-.1	+.4
9	+.2	+.2	0	+.3
10	+.2	+.2	0	+.3

Testing was also done at the 11th grade level but is not yet available for 1976. Prior to that time, however, mathematics scores have generally risen at the high school because of the establishment of a requirement that all high school students must demonstrate a proficiency in basic mathematics before they graduate.

Not shown in the above tables are the scores in Study Skills which were consistently above national norms in all areas through the life of the project. The district has a complete summary of achievement results available on request.

One of the objectives of the project was to decrease the number of students in the "low range" of achievement. The recent statewide assessment showed that the district fourth graders found only 15.1% in this "low range" as compared to approximately 25% at the beginning of the project.

Surveys of student attitudes about school, about various subjects and about the specific courses students enroll in have been taken over the life of the project. Students invariably express positive attitudes about most of the subjects, but they are particularly enthusiastic about the opportunity to study at their own speed, about the alternatives offered during the interim month and about the requirement that they get some practical work experience.

Individualized Instruction

Individualized instruction has gradually moved throughout the grades, with at least one program available to students in every school and at every grade level. For example, the elementary grades students might have studies in any of the following: Franklin Pierce Mathematics Management and Support System, Wisconsin Design Reading, Criterion Reading, IPI reading or mathematics, ESS Science or Hawaii English Program.

All these are individualized programs of instruction instituted as a result of the Experimental Schools Project.

The Interim

The interim, which operates in all secondary schools and in some elementary schools, is a period of three or four weeks when students can choose courses totally different from those normally available. Some Franklin Pierce schools conduct the interim in January and some in May.

Students can select only one or two classes during the interim, classes which may run two or three hours in length of all day. In this way it is possible for a student to take a class in skiing or a travel class to another part of the country or to another part of the world.

Evidence is available that such course offerings, primarily created from teacher and student interests, are responsible for a definite increase in students' self-image and their positive attitude toward school. One distinct advantage noted immediately in the junior high school was the obvious decline in disciplinary problems during the interim.

Another plus is data that supports the idea that teachers in the interim teach in a different manner from what they do in their regular classes. Changing the teaching environment does change teaching methods.

During the interim as well as during the regular semester students can sign up for work experience--it is required for graduation in both of the district's high schools. In a 950-student high school, upwards of 200 students may be out on the job during a semester or an interim. One work counselor is responsible for their placement, their supervision (with their employers, of course) and their evaluation.

But learning during the five years of the Experimental Schools Project has not been confined to students. Teachers too have learned. They have learned how to teach in a variety of new and different instructional programs, they have learned how to develop curriculum management systems and they have learned that implementation of new programs is a slow process.

Training

With the installation of nearly 20 distinct individualized curriculum programs in various schools over the past several years, teachers have had to learn how to teach all over again. Most of the Franklin Pierce schools originally operated with self-contained classrooms. Individualization of instruction--especially in schools that went to large-group operations--required a whole new set of skills. During the summers, after school and on weekends teachers were trained in several different programs. In fact, more than 100 specific training sessions took place. Project funds were used to pay teachers for summer and weekend work.

Curriculum Development

At the same time teachers and administrators discovered that good instructional programs were not commercially available in a number of areas. So the teachers formed groups and developed their own curriculum packages.

Literally hundreds of new instructional programs have been created and then modified and refined. Teachers created such products as the Franklin Pierce Mathematics Management and Support System; Communication Goals; Elementary Social Studies System; Contemporary World Problems for television; Mathematics Activity Program for junior high school; sophomore humanities; vocational English; high school Occupational Versatiltiy shop; high school model office; junior and senior high school reading laboratories. In addition, many mini-courses were created for interim instruction.

Administration

Administrators also have been involved in learning. The Experimental Schools Project from its beginning did not have a heirarchy of administrators. The director's duties were taken over by the principals--all 13 of them in the second half of the project.

The principals formed a Program Cabinet, with the blessing of the superintendent and the National Institute of Education. As a cabinet, the principals took over responsibility for the financial and program management of the project. They were aided by a financial secretary and a staff assistant.

Through the added responsibilites of the cabinet, the principals have gradually learned more about district-wide management. They are more knowledgeable about what other schools in the district are doing, and they know a lot more about curriculum. In fact, many of the princpals now have direct responsibility for a specific curriculum area: mathematics, language, arts, science, social studies, personal development, career education. In this role they work directly with teacher curriculum committees in the development and refinement of curriculum through the district.

Project personnel have learned some other things too. For example, one of the goals of the project was to develop a system for determining the cost-effectiveness of specific instructional programs. While much work has gone into that idea, practical results were slow in forthcoming. The district was able to develop a program budget, and it is now at the point of having all the information it needs about each of the courses. It now can marry the cost with the effectiveness to obtain a practical model.

Community

And relations with the people of the community have improved through the years of the project. Each school now boasts a parent advisory committee that helps the principal and his staff make decisions about curriculum and about activities in the school. Such a close relationship between the schools and the community did not exist before, except through some PTA groups. These still function.

The Experimental Schools Project put nearly $5 million into the Franklin Pierce School District. Only the students themselves may ever know whether the experiment was a success.

HISTORY OF THE EXPERIMENTAL SCHOOLS PROJECT

ORIGINAL FUNDING GRANT

A summary of the events leading up to the original funding of the project in 1971 under a U. S. Office of Education grant.

Development of the Experimental Schools Project in the Franklin Pierce School District occurred over a three-month period in early 1971. In response to an invitation by the U. S. Office of Education to submit proposals for an experimental schools project, the district, under the guidance of the superintendent, Dr. Edward E. Hill, developed the basis of an idea to significantly change the entire school district through a variety of means.

Response to the proposal was the awarding by the U. S. Office of Education of a $10,000 planning grant to the Franklin Pierce district. Seven other proposals, from among a total of 489 applicants, were similarly funded in February of 1971. Those districts were given approximately 60 days in which to provide detailed specifications for their proposals.

A series of meetings with various populations was held during the development process. Principals of the six schools to be the core of the project discussed the concepts of the proposal and provided detailed plans for the operations of their schools during the proposed years of the project.

Teachers were invited to respond to the various ideas contained in the proposal, and their positive response to the project was a significant factor in the district's decisions to go ahead with what was originally called Project Promise, Phase II. Project Promise was an earlier project which provided funds for a large group instruction room at Keithley Junior High School. That experimental room contained an electronic response system and a computer which kept the teacher informed of student and group responses. The room provided opportunity for teachers to make use of many audio-visual media.

A two-day community-wide charrette also was held where principals, teachers, students, parents and state office of public instruction and university officials discussed the various aspects of the proposed project and responded to them. This series of meetings, culminating in a weekend session at Pacific Lutheran University, representatives of which were involved in the initial planning, provided opportunity for hundreds of people to express their ideas, their criticisms, their hopes and their dreams. It was their remarks and comments upon which the district's Experimental Schools Project was based.

The U. S. Office of Education originally asked for proposals outlining a K-12 experimental program that combined a variety of innovative practices. The goal was to test and demonstrate the advantages of combining into a single package a variety of innovative practices which have previously been introduced only on a selective, or scattered, basis. The USOE said the proposals should consider the following factors:

--Primary targe population of low-income children.

--Student population of approximately 2,000 to 5,000.

--A central theme or educational concept that reflects change from what exists to what ought to be in terms of pupil needs and aspirations.

Data collected over a five-year period indicated that the target schools, representing 2,800 students, were experiencing an average 45 per cent student turnover rate. Non-project schools in the district had only a 27 per cent rate. The target schools also showed a population with a higher unemployment rate, a higher percentage of low-income families and a higher percentage of military-related personnel.

The final result was a $2.4 million grant to fund the first 30 months of a projected five-year project. Two other districts, Minneapolis, Minn., and Berkeley, Calif., were funded at the same time.

PURPOSE AND SCOPE

An outline of the basic goals and objectives of the ESP project.

As originally designed, the project would include six of the district's 13 schools, with the other seven schools acting as a control group. The project schools were:

1-Brookdale Elementary School
2-Christensen Elementary School
3-Parkland Elementary School
4-Sales Elementary School
5-Keithley Junior High School
6-Washington High School

The control schools were:

1-Central Avenue Elementary School
2-Collins Elementary School
3-Elmhurst Elementary School
4-Harvard Elementary School
5-Midland Elementary School
6-Ford Junior High School
7-Franklin Pierce High School

The control aspect of the non-project schools was dropped soon after the project began, and the seven schools entered the project during its second 30-month period.

The "Central Theme" of the Experimental Schools Project was aptly stated: "Providing an appopriate environment for optimum learning for each student." Basically, that meant that each school in the project would, through initial placement (or replacement if necessary) and through continuous evaluation and monitoring, provide for each student the most appropriate curriculum delivery system and learning environment possible.

A variety of learning environments were envisioned to be made available to students as they progress through various educational programs. Such environments might include:

- --The regular "reactive group" classroom.
- --The seminar "interactive" classroom.
- --A variety of "active" learning environments:
    - the learning resource center
    - the home color television set
    - the student center
    - the school laboratory in science, home economics and langauges
- --A variety of work experience stations in district classrooms, district job centers, business and industry and institutions.
- --Outdoor education areas and national, state and local parks.
- --Lifetime sports locations, including bowling alleys, swimming pools, archery ranges, golf courses and the like.
- --International and interstate exchange programs with classroom locations on a short-term basis throughout the world.

Included in the variety of classroom situations would be also a variety of curriculum strategies, primarily imported from other locations.

Time in school also was considered a variable that might contribute to development of different learning environments. Whereas most public schools operate on a five-day week, 180-day school year, ESP project schools were to offer:

- --A basic four-day instructional week with 'split' sessions beginning as early as 8:30 a.m. or as late as 12 noon.
- --A learning resource center open 240 days a year as well as each evening.
- --A fifth day optional program providing a variety of experiences in environmental education, lifetime sports, vocational experiences and similar experiences not ordinarily available to public school students before.
- --Interim month programs in January and July with students taking only one or two intensive courses instead of four or five.

Such an educational picture was painted by project developers from a statement of needs developed from surveys of parents and from state-wide needs statements. The statement of needs included:

1. The need for every student to experience success.
2. The need for every student to actively participate in the learning process and to be given experiences in school which develop real responsiblity.
3. The need for students to be able to build a positive self-image through being provided with a sense of dignity and pride; a need to foster a sense of identity; a need to encourage self-confidence and willingness to meet challenging situations.
4. The need for school-sponsored programs which utilize the students' own interests as vehicles for learning.
5. The need for experiences in school which will prepare students for a future which does not presently exist and

which is not precisely known.

6. The need for idealism.

In order to provide students with the opportunity to meet such needs, the school district itself identified the following:

1. Teachers need to be retrained to work at a higher performance level.
2. School buildings need to be utilized the year around.
3. Schools need to utilize staff members more efficiently.
4. School districts need to promote greater community inolvement.
5. School districts need to develop or adapt individualized curriculum models which provide 'fluid' movement between the range of individualized teaching materials and group-oriented curriculum models.

Besides all this, the project planners envisioned a series of needs related to the dissemination of project components. These included:

1. The need for a training program for each component.
2. The need for project components to be accounted for in a Planned Programmed Budget Evaluation System (PPBES).
3. The need for determinc cost-effective import and export criteria.
4. The need to develop methods of handling visitors to the project schools so they do not become a part of the educational process.
5. The need for evaluation in the affective as well as in the psychomotor domain for all project components; external as well as internal evaluation designs are necessary.

Such needs were to met, according to project developers, through activities in 15 separate components, 10 of which were directed toward students and the other five designed to provide support for the first 10. Those components* were:

1. Individualized education programs.
2. Diagnostic teaching
3. Student and teacher developed curriculum
4. Lifetime sports and activities
5. Environmental education
6. International education
7. Extended Time: Day, week, year
8. Vocational Education
9. Drug Education
10. Improved use of media and technology
11. Training
12. Planned programmed budget evaluation system
13. Administration
14. Dissemination
15. Evaluation and Research and Development

REFUNDING CONTRACT

A summary of the events leading up to a re-funding of the project in 1973 under a National Institute of Education contract.

As the grant for the operation of the Experimental Schools Project in the Franklin Pierce School District began to draw to a close during the 1972-73 school year, project personnel began the task of preparing documents leading to a proposed funding for a second 30 months.

However, during the two years the district had been in the project, numerous changes had occurred. Not the least of these was the creation of the National Institute of Education and the transfer of the Experimental Schools Project program to NIE. This placed the district in the position of seeking a "contract" rather than a direct grant for the rest of the project. Other changes involved the project itself.

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*Details regarding accomplishments within each of the 15 components during the first 30 months is contained in "Final Narrative Report, Experimental Schools Project OEG-0-71-3464, Nov. 1973".

During the first two year's of operation, project personnel and U. S. Office of Education project directors decided that various aspects of the project currently were not feasible and should be dropped. These included the major closed-circuit television system connecting Pacific Lutheran University and some of the project schools. That portion of the project never really got off the ground because of the extremely high cost estimates for the installation of the closed-circuit system.

Near the end of the project, project officials were informed that further funding of international education and environmental education would not be approved. International education, which had involved groups of students visiting such places as Southeast Asia, Mexico, Canada, Germany, Greece and Italy, was felt to be a viable program but economically not feasible. Environmental education had not developed sufficiently to justify further expenditure, according to USOE officials.

Another significant change affecting the project planners was that seven different schools were to enter the project, making a total of 13--the entire school district, made up of nearly 8,000 students. Some of those new project schools already had adopted some of the project programs on their own initiative, and Ford Junior High School and been funded under the early part of the project to also implement Occupational Versatility, the shop program piloted by Keithley Junior High School.

Another change involved the form that involvement of the community would take. Originally, the project was developed through the means of a charrette--a gathering of people in the community for the purpose of solving a problem. The first year of the project a second charrette occurred to gain further comment and reaction by parents and students. However, principals later revealed a dissatisfaction with the form of the charrette, commenting that parents and students were much more interested in their "own" schools than they were in district-wide programs. They proposed the abandonment of the charrette and the creation of activities in the school that would bring about a reaction from parents and other community people. About that same time, some of the district's schools developed Parent Advisory Councils as a direct result of participation in a Title I project. The success of such groups, called PACs brought about their development in all schools as a means of gaining community participation and reaction in the schools.

Other changes which had taken place included one of project leadership. As the project began, the superintendent accepted the title of project director, but USOE officials soon urged the naming of another individual with more time to devote. As a result the administrative assistant for secondary curriculum became the ESP project director. His secretary took over the task of keeping track of the project's budgets and expenditures, a complex task.

Near the beginning of the second year, NIE project officials, in cooperation with Franklin Pierce district administrators, suggested a second adjustment in project leadership. Following the fact that the principals in the district had accepted much of the responsibility for the success of the project within their own schools, project officials developed the idea that those same principals should also have a direct say in the operation of the project. From this was born the ESP Program Cabinet, a body made up of the principals of the first six project schools. The administrative assistant helped direct the cabinet the first few months; then the disseminator accepted the role of assistant to the cabinet, to function with the cabinet chairman, who was elected by the group.

Planning for the second phase involved many conferences with NIE personnel, both in Tacoma and in Washington D.C. The ultimate result of those conferences, plus a lot of effort in between by district staff, was a document outlining what would occur in the project during the second 30 months.

Significantly, the planning process involved each principal preparing a detailed document outlining what had happened in his school to date as a result of the use of ESP funds and as a result of the use of other funds. He also outlined specifically what he would do during the second 30-month phase of the project, how he would do it and how much it would cost. The same kind of plan was developed by personnel responsible for support components of the project.

SCOPE OF THE REFUNDED PROJECT

An outline of the goals, objectives and activities of the project during the second 30-month funding period.

With the enlargement of the project from six to 13 schools during its second phase, and with the opportunity to partly evaluate the first phase of the project, developers took the opportunity to make some other changes. While the basic concept of the project remained the same, certain activities and directions were modified.

For example, the project's theme-the search for an optimum learning environment--and the basic needs which led originally to the project remained unchanged. On the other hand, the structure of the project changed in that many of the original 15 components were eliminated, modified or included within other components.

A general weakness of the original project was corrected by the addition of general goals and specific objectives.

Seven orgnaizational goals were included in the re-funding proposal. Following the general framework laid down by the needs statements, the goals gave direction to the project. They were:

Goal No. 1: A comprehensive curriculum delivery system K-12

Goal No. 2: Improved staffing

Goal No. 3: A restructured school year

Goal No. 4: A restructured school day and week

Goal No. 5: Vocational work experience

Goal No. 6: Programs built around student interest

Goal No. 7: Student success

Following this basic direction, eleven specific objectives were formulated. They were:

1. High priority will be given to student programs and experiences which result in success; low priority will be given to student program activities and experiences which result in failure.
2. High priority will be given to the creation of alternative program activities and teaching modes which take into account the different patterns of learning. Highest priority will be given to the development and adaptation of programs which utilize a balance of the reactive and interactive learning cycles. Lowest priority will be given to programs which utilize only the reactive learning cycle.
3. Vocational work experience and/or career education will be available to all students in grades 1-12.
4. The program activities will be organized in such a way that each student will be able to develop a positive self-image.
5. Intensive education courses lasting for two to six hours a day during the interims and interdisciplinary intensive

education courses will increasingly be utilized in lieu of lock step concurrent five and six period courses.

6. Teachers are to be trained to work in ungraded programs; to develop and teach in the intensive education programs; to improve educator-learner relationships; and to work effectively with improved staffing models.
7. To facilitate the flexibility required for new programs, school buildings will be utilized the year around and kept open evenings when necessary.
8. To facilitate individualization and promote the interactive learning process, a significantly greater utilization of student and parent trained volunteers will be required.
9. Representatives of community groups, students, teachers and administrators will meet on a regular basis to exchange ideas on important educational issues.
10. A cost-effectiveness formula will be developed showing the relative cost of operating the district programs per student hour. This cost will be related to deviation from the mean "Z" scores secured from testing students' attitude, interest and achievement growth as measured on criterion referenced tests, and achievement growth as measured on standardized tests.
11. A dissemination program will be developed to keep community and educators informed of the project's progress.

To carry the activities designed to meet these objectives, the project provided for a total of 13 individual school components; four direct support components of administration, training, dissemination and evaluation; and indirect support components, including budgeting and fiscal services, health services for target children, transportation, additional custodial services, extra maintenance expenses and minor remodeling.

In an attempt to tie together a wide range of educational program activities that were designed to take place within the school components, project developers created the concept of program streams. This move was also seen as a help to the development of planned programmed budgeting.

A program stream was defined as a grouping of courses (program activities) which have similar goals, objectives, and curriculum delivery procedures. These program activities can be organized into a comprehensive K-12 management system which articulates the objectives and teaching procedures throughout all the courses in the school district. The program streams encompass curriculum, alternative uses of time and space, staffing, administration and training elements. Six program streams were identified: Social Studies, Mathematics, Communications, Science, Personal Development and Career Education.

The project documents included a detailed listing of program activities within each of the six streams, with a link between each activity and the related project objective. In addition, detailed plans were prepared for each of the school and direct support components. A special section of the project document dealt with the governance of the multi-million dollar project. The project called for the Program Cabinet to include all 13 principals and for its chairman to report directly to the superintendency--an administrative creation made up of the superintendent and deputy superintendent. The cabinet would function directly with the directors of training, program development, special education and vocational education.

The scope of the final 30-month portion of the project then involved a detailed list of program activities to take place within program streams in the 13 component schools, a variety of support activities and a modified project administration--all designed to meet needs as expressed in seven goals and 11 specific objectives.

CURRICULUM STREAM ACCOMPLISHMENTS

A general discussion of what was accomplished during the life of the project within the six major curriculum streams.

Curriculum activities throughout the Franklin Pierce district were organized into six basic elements known as program streams. While this was designed mostly for ease of identification in the area of Planned Programmed Budgeting, its other identification advantages also have been of considerable benefit. Essentially a program stream has been defined as a grouping of courses (program activities) which have similar goals, objectives and curriculum delivery procedures. These program activities can be organized into a comprehensive K-12 management system which articulates the objectives and teaching procedures throughout all the courses in the school district. The program streams encompass curriculum, alternative uses of time and space, staffing, administration and training elements.

The six identified program streams are social studies, mathematics, communications, science, personal development and career education.

During the ESP project, a significant number of activities took place within many of the program streams. Teachers and administrators worked together to formulate new curriculum programs; teachers and aides were trained in the use of various materials, equipment and programs; and many new curriculum program activities were implemented. Details of each of these aspects can be found in other sections of this report on Individual Schools Accomplishments, Training Accomplishments and Curriculum Development.

In general terms, the various activities related to the program streams resulted in four benefits to the district.

1. Teacher knowledge--Because teachers themselves, individually and in groups, were directly associated with the planning, development and implementation of curriculum, they have become much more knowledgeable about curriculum. The teachers in the Franklin Pierce district, as a group, know what the district's goals and objectives are, even within the program streams, they know what needs to be done to accomplish those objectives and they knowhow to go about doing those things that need to be done. It has been suggested by several individuals that the teachers in the FP district, as a result of participation in the ESP project, probably are more knowledgeable about curriculum, its benefits and its development than almost any similar group of teachers anywhere.

2. Teacher cooperation--The ability of a group of teachers--particularly from different schools and/or grade levels--to sit down together and solve problems in curriculum is a valuable asset in any district. This is an asset that now exists to a great degree in the FP district as a result of the many curriculum activities teachers participated in during the project's five-year life. Many examples exist of teachers having worked together over a long period of time to create new curriculum packages, and then to revise and modify them time and time again. In fact, as the project ends, the modification process has continued.

3. Use of instructional aides--The number of non-professional personnel working in the classrooms increased many times during the course of the project. Because of the wide-spread use of individualized instruction, district teachers and administrators soon realized that aides were essential. Individualized instruction requires detailed record-keeping and much tutoring. Teachers had to have help; and that's where aides came in. Many of the district's aides came from a training program at a neighboring vocational-technical institute, and the district accepted students from

the school as aides-in-training for several weeks at a time. Eventually, however, the district had to be able to provide for permanent classroom aides or drop its individualized program. By the end of the project, the district administration and principals had been able to retain almost all aides--or in some cases revise programs to reduce the need for aides--without the use of project funds.

4. Use of materials and equipment--A much better use of materials and equipment has resulted from the project. Prior to the beginning of ESP, most curriculum in the district was textbook-oriented. This means that curriculum was being determined by the textbook publishers more than by the district or its teachers. Now, however, the district has indivdualized much of its curriculum, and teachers have learned how to use a wide variety of material and equipment that relate to the program stream. Materials and equipment now are supplementary to the curriculum instead of directing the curriculum. Teachers now direct the curriculum, and use the material and equipment to help them teach.

Many specific programs were implemented in each of the streams during the life of the project. While details are listed elsewhere, the major accomplishments in each stream are included here. Much occurred during the first phase of the project, while the second phase was a time of expanding similar programs to the other schools and of modifying existing programs to improve them. In some cases, curriculum developments occurred during the second 30 months that had been started during the first phase. This summary includes information about accomplishments during both phases.

SOCIAL STUDIES STREAM

1. A K-6 Franklin Pierce Social Studies System was created by the teachers and implemented in all schools. The system includes concept statements, process statements,

outcome objectives, correlated materials and activities. Also developed is a bank of test materials.

2. A two-year program was implemented for fifth and sixth grade students. It consists of Man, A Course of Study (MACOS) for fifth graders and People and Technology for sixth graders. Both of these are inquiry programs implemented during a four-year period. In addition, the district developed a teacher's guide for MACOS.
3. A television course in Contemporary World Problems was developed and implemented for high school students. Available on home television through the educational television station in a neighboring district, the course was designed for the more able students who wants to devote his time to other pursuits. No class time is scheduled for this program, though a teacher monitors written assignments.
4. A combination basic textbook series and a large information storage-retrieval system was implemented in the elementary schools. Called the Holt, Rinehart, Winston Databank program, the system emphasizes inquiry, original research and discussion.
5. ESCAPE, a junior high school field study program involving tours of the state, was developed and implemented. It provided a credit in state history for participants.
6. A broad range of mini-courses were developed and implemented, mostly at the secondary level, as part of the interim program. These included such programs as Black Studies, Community Resources, Violence in America, the Civil War, the Cold War, Politics in Action and Northwest Tours of Business and Industry.

MATHEMATICS STREAM

1. The Franklin Pierce Mathematics Management and Support System was developed and implemented in elementary schools. It went through several revisions and was re-correlated with the Individually Prescribed Instruction (IPI) program. It was used in the mathematics laboratory in the junior high school with students who were deficient in mathematics skills. The system includes more than 180 specific objectives correlated with more than 20 different textbooks and supplementary program. A battery of diagnostic and pre- and post-test materials accompanies the system. Student tracking and progress reporting materials also were developed.
2. Individually Prescribed Instruction (IPI) was imported from the district's demonstration school and implemented in several other elementary schools.
3. A mathematics laboratory was created at each of the four secondary schools. Each laboratory, designed to provide individualized instruction and assistance for students, generally operates with different materials and in a different manner. In conjunction with the development of the laboratories, one junior high staff also created an entire individualized system of activity packages tied to several series of basic textbooks.
4. A program of survival skills was developed at the high school level. Included is a basic test of math skills, now containing four different forms. Also included is a set of instructional booklets covering each of the

different areas included in the test. These materials are used on an individual basis in the math laboratory.

COMMUNICATIONS STREAM

1. A Franklin Pierce Communications Goals system was developed. Accepted on the elementary and secondary levels, the system includes a collection of coded goals related to elementary, junior and senior high levels. In addition, these goals are correlated with the elementary systems of Criterion Reading, Wisconsin Design and Individually Prescribed Instruction (IPI). A pupil progress form is included as well as a bank of test materials.
2. Criterion Reading Management System was implemented in some of the project elementary schools. The system includes diagnostic and prescription techniques based upon performance-based and criterion-referenced materials.
3. Wisconsin Design for Reading Skill Development was installed in two district elementary schools. It involves a systematic approach to teaching reading skills. It includes at this time only the word attack skills.
4. Individual Prescribed Instruction (IPI) in reading was imported from the district's demonstration school for use in some of the other elementary schools as a supplementary program.
5. The other three secondary schools imported from Franklin Pierce High School the Craig Reading Laboratory. It involves a testing and tracking system for individualized reading through the use of Craig reading machines and a body of graded reading materials.

6. Communications Versatility was implemented at one elementary school. Using the Hawaii English Program as a base, the system is the only individualized language instruction in the project. It was implemented over a three-year period.
7. A sophomore language program was developed at the high school level. Including diagnostic material and specific instruction in basic language skills, reading and literature, the program serves as the last general English program for high school students.
8. Mini-courses were created for interim periods, including trips to the Ashland Shakespearean Festival, the Bible as Literature, Children's Theater and The Puppet Players.

SCIENCE STREAM

1. Elementary Science Study (ESS) was implemented as the major elementary school science program, though it is used mostly in conjunction with basic science tests. ESS is a program that lets children actively experiment with materials and objects in an inquiry approach. The district sequenced the 80 different units into a grade level plan and correlated them with the textbook series. A central storage and distribution center for the materials is in use.
2. A variety of activity packages were developed in several areas of the secondary schools to individualize some of the science curriculum. These areas include biology, chemistry, and electronics.
3. Several science-related mini-courses were developed for use during the interims. They include such courses as meteorology, oceanography and wildlife biology.

PERSONAL DEVELOPMENT STREAM

1. Hundreds of mini-courses were developed for use in interim and fifth day programs. These courses provided a variety of skills related to special interests and leisure-time activities. All schools in the project offered some type of interim or fifth day program.
2. Arts and crafts centers were developed in several elementary schools. These were used during interim and fifth day periods as well as during regular times. Usually an aide directed the center.
3. The Pullman Physical Education program was implemented in several elementary schools.

CAREER EDUCATION STREAM

1. Occupational Versatility, an individualized industrial arts program, was implemented in both junior high schools. Offering up to about a dozen different experience areas, the program handled more than 400 students a semester. It is open to all students.
2. A comprehensive work experience program was developed and implemented. In conjunction with a requirement that all students have some form of work experience before they graduate from high school, the district provides credit for many kinds of work experience, both in the community and within the district. Many students gain experience as teacher assistants and cross-age tutors. Students who work at paid jobs outside of school hours can meet the work experience credit by having their employer sign a work form.

3. A career planning center was developed in one elementary school. It includes an aide and a teaching guide. Similar work-type areas exist in other elementary schools, but experiences there are mostly of the hands-on variety. In conjunction with these centers, a wide variety of interim and fifth day mini-courses were developed.
4. The high school industrial arts program was revamped into a form patterned after the junior High Occupational Versatility. The comprehensive, individualized program provides opportunities for students interested in developing skills and knowledge in such areas as agriculture, carpentry, cabinet-making, metal work and seamanship.
5. A simulated business office operates at one high school to provide business education students with a type of work experience that is not possible in a regular classroom.
6. Many interim courses at the secondary level were offered to provide students with career-oriented experiences.

COMPONENT ACCOMPLISHMENTS

INDIVIDUAL SCHOOLS

A summary of what was accomplished during the project by the 13 individual schools.

Because of the nature of the Experimental Schools Project in the Franklin Pierce School District, what occurred in the district's schools between 1971 and 1976 is important. This section of the report reviews the activities of each of the schools as they relate to curriculum implementation, organization or any other factor which might have had some influence upon the creation of an "optimum learning environment" for the students of that school.

The reader will recall that the first phase of the project dealt only with six schools, four elementary and two secondary. The other seven schools did not become actual participants in the project until the fall of 1974. However, at the very beginning, the non-project schools were paired off with project schools for control purposes. This was quickly abandoned, but the close association between schools at the beginning--as well as later circumstances--caused some dramatic changes in some of the non-project schools.

Therefore, considerable change took place in both project and non-project schools throughout the early phase of ESP. Where certain of those changes were documented or were visible, their existence is noted in this report.

For the most part, this section deals with each of the district's schools, covering each of the following topics:

--Condition of the school prior to the beginning of the project in 1971.

--Summary of curriculum and other changes made as a result of the school having participated in the project.

BROOKDALE ELEMENTARY SCHOOL

A K-6 elementary school constructed in 1957, with classrooms grouped in pods of four rooms each. Enrollment in 1973-74: 490. Organized on an IGE model. An original project school.

1. SOCIAL STUDIES

In the beginning--A basic program using a general textbook series, supplemented with audiovisual and other resource materials available either in the school's own resource center (library) or through the district.

During the project--Man: A Course of Study was implemented in 1971 for fifth graders. Through the study of animals and primitive man, students learn some basic concepts about how all living things must adjust and adapt to their environment. Later, for students in the sixth grade, a new course, called People and Technology was implemented. The course deals with the technology which has been developed by man, how it helps to improve his life and the problems which it creates. Three teachers were trained in using the course materials. In all units a multi-media approach to the teaching of social studies, using the Holt, Rinehart and Winston Data Banks and the Individualized Map and Globe Study Skills Program was implemented with training of teachers by the publisher's sales representatives. In addition, teachers in all units developed and put into use learning centers, units of study, individual student learning packages and a variety of assessment methods.

2. MATHEMATICS

In the beginning--A basic textbook program with the use of some supplementary material existed throughout the school.

During the project--An Individually Prescribed Instruction (IPI) program was instituted in the fall of 1971 in a new large-group facility constructed where a covered play area had been located between classroom units. The pilot program of Franklin Pierce Mathematics Management and Support System (FPMMSS) was used in a few classrooms the next year. To supplement the school's extensive use of Individually Prescribed Instruction (IPI), the staff continued the implementation of FPMMSS during the rest of the project. Using as a resource a math committee made up of one teacher from each unit, one of whom represented the school on a district-wide math committee; the school offered direction and instruction for all teachers in the use of the math system.

3. COMMUNICATIONS

In the beginning--A basic textbook program operated in language arts, spelling and reading at all grade levels. Some supplementary materials also were used.

During the project--Distar Reading was implemented in 1971 for kindergarten and primary children. The following year the school put into use the Wisconsin Design Reading Management System. Only word attack skills and study skills units were available, however. The system provides for individualized instruction in reading skills. Unfortunately, the other units (comprehension, self-directed reading, interpretive reading, creative reading) were never made available by the publisher during the next three years. Several teachers spent time developing interest centers and learning packages. Individualized Spelling kits were to be implemented in Units B, C, and D, but this was not done.

4. SCIENCE

In the beginning--Basic texts, "Concepts in Science" and "Science Through Discovery", and field trips constituted the science program. Supplementary films and other materials were available. Sixth graders each year spent a week at the district's outdoor education camp.

During the project--ESS Science was completely implemented at Brookdale, following its initial implementation during 1972-73. Several teachers also spent time developing science interest centers for use in individual classrooms. A committee of students and teachers developed a master plan for the building of a nature trail and general beautification of the school grounds, but the project was canceled when preliminary cost estimates turned out to be prohibitively high. The committee also determined the project would take an excessive number of man-hours to implement.

5. PERSONAL DEVELOPME[illegible]T

In the beginning--General art, music and physical education were offered, with music involving both vocal and instrumental instruction in addition to some television general music programming.

During the project--A complete Fifth Day program was implemented with a wide variety of special interest classes being offered students on a choice basis. The classes included swimming, bowling, arts and crafts, typing, pottery, drama, archery, knitting, and folk dancing. Each year some additions and deletions were made in the courses, and teachers frequently modified the content to reflect student interests. Later it implemented the Grace C. Nash mixed-media, multi-sensory "expressive arts" program. ESP provided district-wide training for all teachers.

6. OTHER

During the project--The school staff re-organized following the individually Guided Education (IGE) model, which provided for grouping multi-aged students into units. A team of teachers function within each unit, assisted by aides and volunteers. An Instructional Improvement Committee made up of unit leaders and the principal makes decisions. A parent Advisory Council also was formed to increase the community involvement. The library was remodeled and expanded to provide a learning resource center to accommodate more individualized study.

CENTRAL AVENUE ELEMENTARY SCHOOL

A K-6 elementary school, with classrooms for the fifth and sixth grades in a separate building. Enrollment in 1973-74: 466. Organized in a basic self-contained model. An original non-project school.

1. SOCIAL STUDIES

In the beginning--A basic textbook program operated using Ginn & Co. materials. As supplements, students had access to reference materials in classrooms and in the library. Nystrom's Map and Globe Study Skills program was intergrated into the over-all program. A variety of audio-visual aids also were available for use in the classrooms. Before it entered the project, the school implemented the fifth grade discovery program of Man: A Course of Study.

During the project--The Social Sciences Course, Concepts and Values, was implemented as a supplementary program. In addition, the Holt, Rinehart Data Bank program of student inquiry was started in all grades. Both new programs were investigated and recommended by the district-wide social studies committee. Training for the implementation of was handled with ESP funds.

2. MATHEMATICS

In the beginning--The school used a basic textbook from Holt, Rinehart and Winston. During the early project years, the school began a special Title I program for students one or more years behind grade level, as determined by the testing program. Those students made use of individualized materials: Adoptive Learning Systems, Precision Math, BASE skills, tapes, games and various manipulative materials.

During the project--Implementation of the Franklin Pierce Mathematics Management and Support System was accomplished at Central Avenue at all grade levels. Through the use of a half-time teacher during a portion of the project, the school was able to thoroughly train teachers in the use of the system, which was designed to meet ESP objectives and to help teachers plan instruction so pupils can become excited about mathematics and develop an intellectual curiosity and process of inquiry about mathematical concepts. As a result of the school's implementation of FPMMSS, three of the teachers went on to develop a supplement to the system: "The Games, Activities and Gimmicks Book." That book was published and used throughout the district during the last year of the project.

3. COMMUNICATIONS

In the beginning--Basic spelling, language and reading textbooks were used, plus whatever supplementary materials a teacher might furnish for student use. Some students having difficulty with reading were worked into the Sullivan Reading Program, especially as Title I funds began to come into the school in the early years of the project.

During the project--Wisconsin Design reading system was implemented in all grade levels when the school entered the project. This involved training of two teachers at a national workshop. The two then trained the rest of the staff over a period of time.

4. SCIENCE

In the beginning--A basic science text, "Concepts in Science " by Harcourt Brace, was in use, with field trips to such places as the seashore, a tree farm, the Pacific Science Center in Seattle and museums. In addition, sixth graders took part in the district's outdoor education program. Before the school entered the project, it took the opportunity to begin implementing the Elementary Science Study (ESS) program. During the project--Full implementation of ESS science program took place after the school entered the project. In addition, the school became the central depository for the materials and units for all the district. The principal qualified as a teacher instructor in ESS, and a non-professional was hired to manage the depository. The program, a series of units developed on a manipulative experience basis, spread to all schools in the district.

5. PERSONAL DEVELOPMENT

In the beginning--Art was taught by each teacher and was correlated to other subject areas. Educational TV offered some art programs in addition. Music was taught by a team, with all students getting vocal instruction and fifth and sixth graders getting band and violin instruction. Television music also was used. The physical education program attempted to teach some basic fundamentals, skills and movements in various activities. An after-school program of volleyball, basketball, football and softball was provided for fifth and sixth graders. During the project--A fifth grade instrumental music program was initiated following the same format that developed at Parkland Elementary School earlier in the project. The program provided a chance for each fifth grade student to participate without purchasing an instrument. Each student actually tried out several band instruments before deciding which one the student might like to play on a more permanent basis in the sixth grade. The project purchased loan instruments and regular music staff taught. Cross-age tutors from the high school were used to help individualize instruction. In additon, the school implemented a Fifth Day program

program of arts and crafts and special interest courses. It made use of regular teachers and community volunteers. A broad range of high-interest classes was offered to the students.

CHRISTENSEN ELEMENTARY SCHOOL

A K-6 elementary school, with classrooms grouped in pods of four rooms each. Originally operating on a self-contianed model, the school organized its classrooms into three units under the Individually Guided Education (IGE) model early in the project. An original project school. Enrollment in 1973-74: 400.

1. SOCIAL STUDIES

In the beginning--The school used a basic social studies textbook program at all levels, supplemented by audiovisual materials and resources from the library.

During the project--A number of new programs were implemented. In the primary unit, the resource center came into broad use in the development and utilization of learning centers. The learning centers make use also of upper unit students as tutors. At the fifth and sixth grade levels, two courses were implemented: Man: A Course of Study (MACOS) and People and Technology. Several additions of materials were made at times throughout the project for MACOS. However, People and Technology later was reduced to only nine weeks to supplement a basic textbook social studies course. Teachers also began using the Holt, Rinehart Data Bank program, which stresses the inquiry approach for elementary students at all grade levels. Nystrom's Map and Globe Skills program was instituted and emphasis placed upon world geography. Most training of teachers for MACOS, People and Technology and Data Bank was handled on a district-wide basis.

2. MATHEMATICS

In the beginning--A general math program using a basic textbook series was in operation. Frequently, teachers would supplement the basic program with their own materials or a variety of materials available at the school, including some manipulative materials, a few games and some individualized work materials.

During the project--Distar I and II arithmetic program was begun in the primary grades. Distar involves placement testing as well as periodic mastery testing after individualized learning. Older students were introduced to Individually Prescribed Instruction (IPI) in mathematics. The individualized program operated with mobile storage units in the school's multipurpose room--the location proved to be rather unsuccessful after a time because of the need for rapid changing from one activity to another. Some Systems 80 programs also were available for young students. In addition, a wide variety of manipulative materials, games, activities, and individual work material was available to the teachers.

3. COMMUNICATIONS

In the beginning--Basic programs were in use in the self-contained classrooms. These include such reading materials as those produced by Scott Foresman, Ginn 360, Lyons & Carnahan and Houghton Mifflin. In addition, the teachers used SRA individualized reading materials. A basic language text and spelling materials completed the program.

During the project--The school implemented the Criterion Reading system, utilizing its expanded resource center for the materials. In addition, teachers began using the Lippincott Basic Reading Program, a phonetic-linguistic approach. Random House individualized reading is available in each unit. In the primary unit, students may use Distar materials for both phonics and language. Systems 80 reading program also is used as a supplement when necessary. All of the different reading programs correlated well with the Criterion Reading system at the school.

4. SCIENCE

In the beginning--Basic textbook programs in science were used, including Concepts of Science and Science Through Discovery. In addition, students received some hands-on and demonstration activities through the school's science kits. Field trips added to the experiences of the students.

During the project--Elementary Science Study (ESS) program materials were introduced early in the project, coupled with training of the teachers in their use. District-wide sequencing of the ESS units and the development of goals and objectives made the program much more useful to teachers in building a complete science course of instruction.

5. PERSONAL DEVELOPMENT

In the beginning--Art, music and physical education activities were available. Art was handled primarily by the classroom teacher, with some television programming available if desired. Music was available on television, and all students could participate in vocal instruction. Upper grade students could learn a band instrument or the violin. Most classroom teachers offered some organized play activities, and the school participated in some afterschool sports for fifth and sixth grade boys and girls.

During the project--A Fifth Day program was organized and implemented by the staff, with the help of aides and parent volunteers. The various activities provided many choices to students which would allow each of them the opportunity for success. The program also was designed to provide some vocational experiences as well as to allow some students to build interest in academic pursuits. Projects in the Fifth Day program at times were: bowling, swimming, general art, ceramics, woodworking, chorus, stitchery, flower looms, baton, liquid embroidery, mini-math, folk and square dancing, basketball, piano, first aid, cooking, newspaper, batik and tie dye, beauty workshop, bell band, rod building,' plan study, raffia and reed, craft projects, collage, games, sewing, fly tying, paper mache', creative storywork, getting to know me, tumbling, plastic braiding, leathercraft, decopage', outdoor cookery and camp crafts, rockhounds, puzzles, holiday crafts, art, physical education, weaving, strings and things, macrame', softball, folk tales, and candle making. In additon, the school implemented the Pullman P.E. program, which was developed by a Washington State University professor under Title III funding. It involved the special training of teachers in a workshop. The Grace C. Nash expressive arts music program also was started, with training of all teachers being provided for by the ESP project. Teacher reaction to the new music program was reported to be very positive.

6. OTHER

During the project--A number of different changes occurred as a direct result of the project that contributed to the school's program. For example, the resource center was expanded by removing a wall between two classrooms and tying the large area into the adjoining library. An interim and an aide worked there to assist the counselor and the halftime librarian. The resource center was supplied with many diagnostic tools, including a wide variety of materials and special equipment; such as single-loop 8mm projectors, language masters, microscopes, Studymates, Systems 80 projectors, listening posts and headsets. Another addition to the school involved the creation of a Parent Advisory

Council, which offered much advice to the school's Instructional Improvement Committee (made up of the principal and the three unit leaders). It was a help to the school in obtaining many parent volunteers to assist in several of the school's programs. Other help was obtained through the hiring of interns and aides, the use of junior and senior high students on work experience programs, and the development of a cross-age tutor program which used students from one unit in another unit.

COLLINS ELEMENTARY SCHOOL

A K-6 elementary school using self-contained classrooms for the most part. Buildings date from the early 1920s up to 1966. Some of the new classrooms are separated only by folding partitions. An original non-project school. Enrollment in 1973-74: 600.

1. SOCIAL STUDIES

In the beginning--A basic textbook approach to social studies, supplemented with a broad range of other materials. The school also made extensive use at various grade levels of the Nystrom Map and Globe Study Skills program. Though it was not an original project school, Collins did join the other schools in implementing the fifth grade Man: A Course of Study (MACOS) program.

During the project--Collins implemented the Holt, Rinehart Data Bank program for the upper grades to round out its social studies course of instruction.

2. MATHEMATICS

In the beginning--A basic textbook (Holt, Rinehart, Winston) was used at Collins in arithmetic. Teachers also had available a variety of manipulative materials to help students. During the early years of the project, before Collins was admitted, the teachers began using Basic Arithmetic Skills Evaluation tests to help identify skill deficiencies.

During the project--The Franklin Pierce Mathematics Management and Support System was brought into the school over a two-year period. Teachers were trained in short workshop sessions as they were beginning to use the system. Funds also were provided for teachers to add materials to the system for their own use.

3. COMMUNICATIONS

In the beginning--A basic approach was in use. Several reading texts were available, and the school attempted to individualize somewhat with the use of the SRA reading kits. Basic language arts, spelling and penmanship texts also were used.

During the project--A program of Criterion Reading was installed in the primary grades over two years. Teachers were trained in the use of the program and its materials during a summer workshop.

4. SCIENCE

In the beginning--Two basic texts, Concepts in Science and Science Through Discovery, were used. Four teachers during the early part of ESP began using some units of Elementary School Science after receiving training during the summer. Field trips supplemented classroom instruction, and sixth graders took part in the district's outdoor education program.

During the project--The remainder of the staff was trained in the use of the ESS units and materials, and the program was fully implemented in grades three through six. The ESS program served an an experience-based supplement to the main course.

5. PERSONAL DEVELOPMENT

In the beginning--Basic music, art and physical education programs were taught in a traditional manner, except that television programming was available in both art and music. Students also could take vocal instruction or take band or violin in the fifth and sixth grades. During the first part of ESP, the school started its own Fifth Day program, including such classes as bowling, swimming, roller skating, ceramics, special art, chorus, geography, foreign language, sign language, games, physical exercise, sewing and home economics.

During the project--The school established and outfitted a student class in woodworking as part of the Fifth Day program. In addition, with some help from parent volunteers in building equipment, the school started the Pullman P.E. program to provide a structured physical activity class for all students.

6. OTHER

During the project--In addition to the resource teacher who worked with identified students with learning disabilities, the school attempted to train the rest of the staff in methods of diagnostic teaching. It was thought this was a way to help students who were scoring too low on district achievement tests.

ELMHURST ELEMENTARY SCHOOL

A K-6 elementary school constructed in 1964. Operated on a self-contained classroom model, the school is housed in two classroom buildings, with a library, office wing in between. A multi-purpose room is in another building. Enrollment in 1973-74: 650. An original non-project school.

1. SOCIAL STUDIES

In the beginning--A basic textbook program existed, supplemented with such materials as films, filmstrips, slides, and study prints. Before the school entered the project, it implemented Man: A Course of Study (MACOS).

During the project--The staff instituted several new programs to supplement the basic social studies curriculum of the school. In grades K through 4, the Concepts and Values program was begun, and the sixth graders received People and Technology. Nystrom's Map and Globe Skills as well as the Holt, Rinehart Data Bank also were installed.

2. MATHEMATICS

In the beginning--Holt, Rinehart, Winston basic mathematics text was used, with some supplementary and manipulative material available for use.

During the project--The Franklin Pierce Mathematics Management and Support System was implemented in most classrooms of the school. In particular, the school became something of a demonstration center for FPMMSS within the district as two teachers held instruction sessions and even videotaped some material to help other teachers implement the system in their classrooms. All Elmhurst teachers attended district training sessions in the system.

3. COMMUNICATIONS

In the beginning--Basic texts in reading, English and spelling were in use at most grade levels. In addition, primary students used the Sullivan Associates Programmed Reading as well as Ginn 360. Random House-Singer Programmed Reading Materials also were available.

During the project--The school implemented the Hawaii English Program throughout its classrooms over a three-year period. In the process the school became the only school in the Northwest to operate the HEP program, and it provided some workshop instruction for teachers from other districts. Installation of the program took three years and considerable training from Project Aloha in California, where the program was brought to the mainland after its development in Hawaii. Implementation also required some remodeling and the hiring of instructional assistants.

4. SCIENCE

In the beginning--Basic textbooks programs were in operation using Concepts in Science (including both texts and laboratory kits) and Science Through Discovery. In addition, fourth and sixth grade students were offered a program of environmental education. Fourth graders had a six-week course in trees, plants, birds and animals, fish and insects, soil, survival and compass. Field trips, speakers and audiovisual materials supplemented the basic course. Sixth graders took part in the district's outdoor education week-long camp program. Drug education also was offered in the fourth and sixth grades. Each teacher developed an individual program based upon Narcotics and Dangerous Drug Abuse Guide, Guidelines for Drug Abuse and Prevention - U.S. Department of Justice, and the state Smoking and Health Guide.

During the project--The Elementary Science Study (ESS) program was implemented in the school as a supplement to the basic science text program. Plans for the development of an environmental study area in a wooded plot at the rear of the school had to be abandoned because of the problems of moving and/or bridging and fencing the creek which runs through the property.

5. PERSONAL DEVELOPMENT

In the beginning--Basic instruction in art and music was a part of the school's program, supplemented by television programming. Music included a music specialist periodically, plus vocal and string instruction. Physical education was taught on a regular basis.

During the project--A Career Planning Center was established for use by students in grades three through six. An instructional assistant operates the center, helping students to complete studies and projects related to their regular classroom work. Special published units of work were created for use in the center.

6. OTHER

During the project--A Parent Advisory Committee was formed and met every month with the principal to discuss the school's programs. In addition, the school developed a workbook for use in its Career Planning Center and published two documents describing its Hawaii English Program.

The school also made good use of aides in training from Clover Park Vocational School on a short-term basis and student cross-age tutors from the junior and senior high schools.

HARVARD ELEMENTARY SCHOOL

A traditional K-6 elementary school constructed in 1955. Consisting of a series of classroom buildings, with an office and multi-purpose facility in a main building, the school is essentially self-contained, though some teachers take part in some cooperative team teaching at times. An original non-project school. Enrollment in 1973-74: 300.

1. SOCIAL STUDIES

In the beginning--A basic textbook program existed for the top five grades, with supplementary audio-visual and reference materials. During the early life of the project, Man: A Course of Study (MACOS) was implemented in the fifth grade.

During the project--People and Technology was implemented for sixth graders to follow the fifth grade MACOS program. A tri mester style of 60-day courses in various geographical units was developed and implemented; it was discontinued later because of scheduling difficulties and the lack of flexibility in using time efficiently.

2. MATHEMATICS

In the beginning--Holt, Rinehart and Winston mathematics textbooks--both consumable and non-consumable, were used throughout the school in a traditional program. In addition, some concrete manipulative materials were used by students when they are appropriate.

During the project--The Franklin Pierce Mathematics Management and Support System was put into use at the fifth and sixth grade levels at first and some general use of it was seen later at other grade levels. A laboratory type approach was made available to teachers to use for special needs. The lab offered a wide variety of manipulative materials and other sources of activity.

3. COMMUNICATIONS

In the beginning--Basic textbooks, supplemented by teacher-prepared material, was used at all grade levels for reading, language and spelling instruction. Students were grouped for reading on the basis of ability, and the resource teacher (counselor) provided assistance for low achievers.

During the project--Criterion Reading system was implemented in kindergarten and grades one, two and three. For intermediate grade students, Individually Prescribed Instruction (IPI) was implemented, following specific training for their teachers.

4. SCIENCE

In the beginning--The basic science textbook programs of Concepts in Science and Science Through Discovery were used in all grades. A science kit accompanied Concepts in Science to provide some simple "experiments" students could try. Early in the project, the school began using Elementary Science Study units as they were available and as teachers could obtain training.

During the project--Some improvements to the Elementary Science Study (ESS) program were made, particularly in sequencing the units and providing methods of tracking students. Environmental areas, including a wooded lot at the rear of the property, were used in some science units.

5. PERSONAL DEVELOPMENT

In the beginning--Traditional programs in music, art and physical education were offered. Art was taught by the classroom teacher with the aid of some television programming. Music also was available on television. In addition, a music teacher was available, as was choral and band and violin instruction for fifth and sixth graders. Physical education was handled by each teacher.

During the project--The Pullman P.E. program, developed in Pullman, Washington, under a Title III grant, was brought into the curriculum along with teacher training. In addition, an arts and crafts center was developed in an unused classroom. The center provided activities related to career awareness and regular fifth day interest areas. It operates with an instructional assistant.

6. OTHER

In the beginning--A building curriculum committee made up of three teachers, the learning resource teacher and the principal, made preliminary decisions based upon faculty information. The entire faculty participated in final decisions, influenced in part by information from the community.

During the project--To increase the involvement of the community in the school's decision-making process, a Parent Advisory Council was formed.

MIDLAND ELEMENTARY SCHOOL

A K-6 program housed in an old eight-grade building originally constructed in the 1920s and added onto since that time. Most of the school functions on a self-contained model, but some individualization occurred during a period prior to the Experimental Schools Project. An original non-project school. Enrollment in 1973-74: 400.

1. SOCIAL STUDIES

In the beginning--A basic textbook approach was used in grades two through six, with supplementary materials available from the library or audio-visual. Nystrom's Map and Globe Study Skills program also was used, particularly in the upper grades as supplementary instruction in geography. Before the school entered the project, it implemented as part of a district-wide program the fifth grade inquiry program called Man: A Course of Study (MACOS).

During the project--The sixth grade program, People and Technology, was implemented as a follow-up course of study to the fifth grade's MACOS. Teachers were trained in the use of the program. A locally developed series of 60-day courses was implemented for the upper grades, which effectively established a trimester plan in social studies. However, after a year of operation, the program was discontinued because of scheduling complications.

2. MATHEMATICS

In the beginning--In grades one and two, basic text materials published by Holt, Rinehart and Winston were used. Teachers grouped students twice a week, and they used manipulative materials when appropriate. In grades three through six, students took part in Individually Prescribed Instruction (IPI) in a large center constructed on the school's second floor. The school served as an IPI demonstration school in the Northwest for the program's publisher, Research for Better Schools, Inc.

During the project--While the school continued to make use of Individually Prescribed Instruction (IPI) as its main math program, teachers also made some progress in using the Franklin Pierce Mathematics Management and Support System. Its use came about primarily through the summer efforts of one Midland teacher who completely revamped the system to emphasize IPI-related material. The revised version, once it was published, became much more widely used in the school as a supplement to IPI. However, most of its use was still restricted to the primary grades.

3. COMMUNICATIONS

In the beginning--Individually Prescribed Instruction (IPI) was used at all grade levels in reading. Both language and spelling were handled by classroom teachers with a basic textbook program.

During the project--With the school using IPI reading programs, little was done to implement any new curriculum materials. Instead, efforts were concentrated upon training new teachers and parent volunteers, as well as instructional assistants, and upon developing additional materials to be used with the program.

4. SCIENCE

In the beginning--A basic textbook program was in operation using Concepts in Science and Science Through Discovery. In addition, some limited experimentation and field experiences were available. Sixth graders took part once a year, for a week, in the district's outdoor education camp. During the early part of the project, the school implemented Individually Prescribed Instruction (IPI) in science in grades one and two, planning to implement two grades a year over a three-year period.

During the project--Plans to expand the school curriculum into IPI science were scrapped after two years of effort with the program at Grades three and four. Teachers found the system too taxing in terms of logistics. Implementation never went beyond those two grade levels. Instead, Elementary Science Study (ESS) program was installed as a supplementary science curriculum in the upper grades, and eventually in all grades as district science committee members developed grade level materials and supplementary guides for use with ESS.

5. PERSONAL DEVELOPMENT

In the beginning--General art, music and physical education were taught by classroom teachers. Art and general music also were available on television. In addition, a music teacher came to the school part time, and students in the fifth and sixth were able to take choral and instrumental instruction.

During the project--The school implemented use of the Pullman P.E. program to provide a structured activity curriculum for students. In addition, it developed and established an operational arts and crafts center which was used during Fifth Day activities. The large craft and woodworking areas in the center were actively used by many teachers and their classes. The arts and crafts center, though patterned after the Parkland model, was designed so it could operate without a fulltime teacher.

6. OTHER

An experimental May interim, designed to coordinate with the interim at Ford Junior High School, was operated by the school with fair success.

JAMES SALES ELEMENTARY SCHOOL

A K-6 elementary school operating as a self-contained model in a building constructed about 1956. The school contains two classroom wings connected by a support wing containing library, office spaces and mutli-purpose room. connecting them. An original project school. With the advent of the project, the school adopted a modified open-concept plan and operated as an IGE school. Enrollment in 1973-74: 390.

1. SOCIAL STUDIES

In the beginning--A basic textbook program existed at all levels, with supplementary materials being used by the teachers. Basic materials such as films, filmstrips, maps and globes were available.

During the project--While primary teachers continued using basic material, merged into teacher-developed units, many other changes occurred. Fifth graders were introduced to Man: A Course of Study (MACOS). Sixth graders later got the companion program, People and Technology. Fourth, fifth and sixth graders began using individualized learning packets from Western States Small School Project. These packets provided some 200 supplementary topics for exploratory research. Nystrom's Map and Globe Study Skills program was made available for fourth through sixth graders also, and frequently the materials were developed into learning centers. Third and fourth graders started using the Holt, Rinehart Data Bank materials. A collection of super 8, single-concept film loops was added to the school's library reference materials. Many of the films in the 36-loop collection refer to social science topics of interest to primary children.

2. MATHEMATICS

In the beginning--A basic textbook program published by Holt, Rinehart, Winston was in operation in the self-contained classrooms.

During the project--With the advent of open-concept, the mathematics program was individualized. Fourth through sixth graders used the Continuous Progress Laboratory kits from Educational Progress Corporation. Supplementary math manipulative materials also were available. Distar mathematics I and II provided systematic skill progression for primary children. Math tapes and games helped reinforce skill development. System 80 provided skill drill for K-4 students on an individualized basis. In addition, the school functioned with such supplementary programs as Precision Math, Singer Drill and Practice kits and BRL Sullivan Programmed Math. Later, the school added CPL kits in the lower grades, built manipulative materials into learning centers and upgraded its Systems 80 materials. As part of the over-all district operation, the school brought into focus the Franklin Pierce Mathematics Management and Support System for all grades. Teachers were trained in the use of the system through the district program. The school's Continuous Progress Lab materials were coordinated with the FPMMSS by the staff.

3. COMMUNICATIONS

In the beginning--A basic textbook approach was used in reading, language and spelling, supplemented by teacher-developed materials as appropriate. In addition, the school used Science Research Associated (SRA) kits in the upper grades. Some Sullivan reading materials also were available for younger children.

During the project--A basic reading and language program--Distar--was installed in the primary grades. Individually Prescribed Instruction (IPI) was implemented for reading instruction in the upper grades. For reinforcement, primary children received prescriptions to use Systems 80 materials. By the same token, children at all grade levels might use the Hoffman Information System materials to reinforce regular classroom reading instruction. Scholastic Individualized Reading kits were provided also. In spelling, the school began using Continuous Progress Spelling materials in grades three through six. Through the life of the project, all of the programs were upgraded by adding more materials to increase their flexibility and appropriateness for more children. A communication center was added where students could learn typing, publish a school newspaper, develop and use videotaped mini-courses and publish creative writing efforts. During the final stages of the project, the teachers began making use of the Communications Goals program, which was developed by a teacher communications curriculum development committee. Individualized spelling and handwriting units were implemented in grades three and four. The teacher-made learning activity packages, particularly in handwriting, were implemented in grade three one year and moved to grade four the following year.

4. SCIENCE

In the beginning--A basic textbook program was in use in most classrooms, supplemented by teacher prepared materials, some use of science kits for experimentation and field trips. Sixth graders also took part in the district's outdoor education camp--in fact, the outdoor program originally was started several years before at James Sales before spreading district-wide.

During the project--Elementary Science Study (ESS) program was implemented in the school's various units, with teachers later making use of the district-developed tracking system for use with ESS. An outdoor classroom was constructed between the two classroom wings with entrance gained either through a hallway exit or the library. In the outdoor area students take care of many animal pets, including rabbits and chickens. Peasants and peacocks periodically make an appearance. Plantings and running water add to its esthetic value as well. Classrooms gained aquarium and incubator units to emphasize life science and salt-water ecology, so important in this part of the country.

5. PERSONAL DEVELOPMENT

In the beginning--Traditional art, music and physical education instruction was offered. Both art and music were available on classroom television programs. In addition, a music teacher visited the school and upper grade students took part in choral and instrumental instruction.

During the project--To help individualize music instruction, the school purchased a Musitronic Learning System, which uses a multiple electronic keyboard and lessons on cassette tapes for a pre-instrument foundation in general music. During the fall and winter, the school offered an interim program, during which a variety of mini-courses provided instruction through a broad range of offerings from tumbling to Canadian exploration. As part of the broad district adoption, Sales also implemented the Pullman P.E. program a structured physical education activity-based curriculum developed at Washington State University under Title III. For primary youngsters mostly, a career center with mini-units on food technology and fabrics was implemented during the school's interim. For upper grade students, a Research for Better Schools affective education program, Achievement Competence Training (ACT), was begun. The 36-hour course offering develops a progressive strategy for study of individual goal-setting, planning, striving and evaluating outcomes.

6. OTHER

During the project--The major change in the school occurred as the project began. A new principal helped the staff implement not only the Individually Guided Education (IGE) organization model, but also a modified open-concept plan. The latter involved removing portions of walls dividing individual classrooms throughout each of the school's two classroom buildings. This partly opened up the classroom units, yet provided generally divided areas where necessary. The school also opened up a resource center staffed by a teacher. Designed for reinforcement of skills, primarily, the center housed the Systems 80 and Hoffman reading programs as well as a variety of other supplementary programs and diagnostic tools. As a part of the major changes occurring in the school, teacher training was undertaken--in addition to district programs related to curriculum adoptions--to help the staff learn how better to function as a part of an IGE open-concept school. Such training involved workshops and seminars in such areas as: Instructional Theory into Practice (developed by Dr. Madeline Hunter) and School Climate Workshop.

PARKLAND ELEMENTARY SCHOOL

A traditional K-6 elementary school housed in one of the oldest buildings, and essentially the only multi-story building in the district. Recently upgraded to meet existing safety codes, the building has play areas and cafeteria in the basement, a large gymnasium, two floors of classrooms for third-fourth and fifth-sixth and a relatively new one-story wing housing the primary children. An original project school. Enrollment in 1973-74: 390.

1. SOCIAL STUDIES

In the beginning--A basic graded social textbook made up the program in each of the grades. This was supplemented by audiovisual materials and library resources, as well as general maps and globes in the classrooms.

During the project--Man: A Course of Study (MACOS) was started in the school for use on an ungraded basis in grades four, five and six. Teachers were trained, and they divided the course into three sets of units, each covering about 60 days of instruction time. Some units were required of students and some were made a matter of choice. In addition, the multi-media Nystrom Map and Globe Study Skills program was begun as a supplementary in the upper grades. At the primary level, film strips and book units on people, community, cities and industries were used.

2. MATHEMATICS

In the beginning--A basic textbook approach was used before the project, with some supplementary materials usually developed by individual teachers.

During the project--The fourth, fifth and sixth grade students were introduced to Holt, Rinehart, Winston non-graded individualized mathematics program. Later, to bolster sagging mathematics achievement test scores, upper grade teachers returned to placing more emphasis upon the basic Silver Burdett math text, using the HRW materials only for supplementary work. The School made use of Systems 80 materials as a supplementary approach to learning number concepts. The machines and materials were placed on movable carts and moved from room to room as needed. The resource rooms also made use of them.

3. COMMUNICATIONS

In the beginning--Basic textbooks were used in reading, language and spelling. Teacher-developed materials were used to supplement the basic programs where appropriate.

During the project--In reading, the school implemented Distar I and II in kindergarten and some first grade rooms. Kindergarten students also used the Swirl program of language arts. Primary reading was coordinated through the Criterion Reading Management System. This system allowed the school to use not only current textbooks, but also new programs it implemented. A Systems 80 program provided some skill reinforcement for primary grades. In the upper grades, Individually Prescribed Instruction (IPI) was used to provide instruction in skills, directed reading and selected reading. At all levels teachers made use of Sullivan reading program materials as needed. Systems 80 language concepts were placed into use at some grade levels and made available at all grade levels to assist high risk students. Additional materials were developed and purchased to supplement the basic Criterion, Individually Prescribed Instruction (IPI) and Distar reading programs.

4. SCIENCE

In the beginning--Concepts in Science and Science Through Discovery basic textbook programs were used by teachers, supplemented by various audiovisual and library materials. Teachers frequently created their own materials too. Sixth graders participated in the district's outdoor education camp once a year.

During the project--The Elementary Science Study program was instituted at all grade levels to provide students with a discovery-based science experience.

5. PERSONAL DEVELOPMENT

In the beginning--Traditional art, music and physical education programs were provided for students. Television programs were available to supplement any classroom instruction in both art and general music. In addition, students in the upper grades could take part in choral or instrumental music programs.

During the project--An arts and crafts center was created in a basement storage room and a teacher was hired. The program provided hands-on vocational and/or career education opportunities for every student in the school on the basis of one half day a week. An aide helped in the center and many parents and others donated usable material. A special fifth grade music program developed also to provide band instruction for each student. The program allowed a student to sample various instruments before he and his parents made a decision about buying an instrument.

Some students were given the opportunity (their choice) to receive instruction in swimming, bowling, fishing, archery and golf as part of a lifetime sports program. While most of these opportunities were available also during the summer interim, the summer offered a special course called Washington, My Home. This course for fifth and sixth graders allowed them to travel throughout the state for a five-week period to study its industries, history and ecology.

6. OTHER

During the project--A major change which took place at the school as a result of participating in the project was the creation of resource centers in the school's old-fashioned extremely wide hallways. The first was created on the top floor for fifth and sixth graders. It provided a center surrounded by a series of classrooms. Most classroom doors remained open during the day and students came and went between the classroom and the hallway resource center as appropriate. The first floor--which included the office, main entrance and teacher's rooms--became a center for third and fourth grades. The primary students, in the newer wing, ended up with a double classroom--not as convenient, but just as functional. A number of aides and volunteers assist the regular staff. The school organized a Parent Advisory Council, which became quite active in discussions of curriculum and school-related topics. The school formed the committee after taking a parent survey that showed better than 90 per cent of the families responding favored formation of such a group.

FORD JUNIOR HIGH SCHOOL

A traditional junior high school for grades 7, 8, and 9. Containing five classroom buildings, an office building, a gymnasium and a cafeteria, the school was constructed in the middle 1950s to house 1,000 students. The campus type school is organized in a traditional departmentalized model. Students continue at Franklin Pierce High School. An original non-project school. Enrollment in 1973-74: 965.

1. SOCIAL STUDIES

In the beginning--A basic program using textbooks and supplementary material operated at all grade levels. Geography was offered for seveth graders, with one classroom using some learning packages developed by the teacher. Eighth graders studied U. S. history. Ninth graders were offered an elective current events program, using newspapers, magazines, films and guest speakers.

During the project--The use of individualized learning packages was extended in seventh grade geography after refinement and further development by the staff. At the eighth grade, the U.S. History Course was revised into a sequential offering that is integrated more closely with social studies offerings at other grade levels. Many individualized learning packages also were developed for the seventh grade geography class. In addition, the school adopted for use during its interim the district's Project Escape, a two-week field study of the state of Washington.

2. MATHEMATICS

In the beginning--An essentially traditional mathematics program was offered, including general math at all grade levels. In addition, a special class was offered seventh graders who were identified as being two or more years below grade level. Slower eighth graders were assisted at times with the use of ninth grade tutors. More advanced ninth graders also had the choice of taking either pre-algebra (for those needing a slower introduction to the advanced mathematics) or regular algebra in place of general mathematics.

During the project--Individualized mathematics was offered to students through the development of a general mathematics laboratory, modeled after the Keithley math lab. The Franklin Pierce Mathematics Management and Support System (FPMMSS) was implemented in the math lab as it applied to students somewhat below grade level. FPMMSS normally is designed for use only in the elementary grades. In addition, an interim course in basic mathematics skills was developed and put into use for students two or more years below grade level in mathematics.

3. COMMUNICATIONS

In the beginning--A traditional program of reading, language, spelling and foreign language was offered. Most English activities were carried on by teachers in regular classrooms. In addition, a seventh grade reading program (partly funded by Title I) provided some individualized instruction for students with limited abilities. Criterion reading materials were used to diagnose the students' deficiencies. A Craig Reader Program helped the students in development of vocabulary, comprehension and speed. Ninth graders could substitute for their English class a course in journalism.

During the project--The installation of a Craig reading laboratory, patterned after a successful use of the Craig program over several years at Franklin Pierce High School, was the major development in this area at Ford during the project. This involved remodeling, installation of Craig equipment, development of special reading tables for the equipment and training of at least two teachers in its use. The reading lab was designed primarily for use with eighth and ninth graders who show reading deficiencies. In addition, interim courses in communications were developed and utilized, and a basic skills mini-course was implemented for eighth and ninth grade students achieving two or more years below grade level in English. Seventh graders were offered an Enriched Reading program.

4. SCIENCE

In the beginning--Basic courses were offered, including general science in the eighth grade and physical science (astronomy, geology and biology) in the ninth grade. The science facilities provided lab benches equipped with gas, water and electricity for use by students as well as a teacher demonstration area.

During the project--Other than some small refinements in basic science offerings, the only changes to come about during the project were those involved in the development of a variety of outdoor environmental courses being offered during the school's May interim.

5. PERSONAL DEVELOPMENT

In the beginning--A traditional selection of personal development courses were offered along with some required classes. Students could take instruction in general music, chorus, band, orchestra, art and physical education-health.

During the project--A variety of interim courses were either imported or developed, depending upon teacher and student interest. In addition, learning activity packages were developed to partly individualize the school's health education program.

6. CAREER EDUCATION

In the beginning--A general shop program was offered in mechanical drawing, wood and metals, with students able to take part in some programs, especially in agriculture, at the high school. During the early part of the project, under the original funding plan, Ford set up and began developing an Occupational Versatility program. Following by one year the installation of the program at Keithley, the Ford OV class was offered to both boys and girls in the eighth and ninth grade. A few selected seventh graders also were admitted. The shop offered eight basic areas: woods, plastics, cold metals, power machines, crafts, graphics and planning. In other areas home economics was offered for eighth and ninth graders, and typing was offered.

During the project--The basic Occupational Versatility program at the school was upgraded with the installation of more equipment and materials. The school added some electric typewriters and duplicating equipment to provide a wider range of experience opportunities for business education students. A work experience program was begun in which students could gain some work experience, mostly at the district's elementary schools. The program was designed to help introduce students to work and its responsibilities.

7. OTHER

In the beginning--A special education team provided assistance to students academically, socially or emotionally handicapped. A school library was available. Before entry into the project, the school formed a Parent Advisory Council.

During the project--Clerical assistance was added for the life of the project to assist teachers in record-keeping and in course development.

In addition to the school's parent advisory council, the school cooperated with a group of parents to organize a Parents' Forum for discussion of problems related to the students.

KEITHLEY JUNIOR HIGH SCHOOL

A traditional junior high school with grades 7-9. Constructed about 15 years ago, the campus-style school has eight one-story wings, including 44 teaching stations, a cafeteria-auditorium, a gymnasium and an office-resource center building. The departmentalized school draws students from five different elementary schools in the district. An original project school. Enrollment in 1973-74: 1100.

1. SOCIAL STUDIES

In the beginning--The school offered a traditional text-based seventh grade course in geography and an eighth grade U. S. history course. Each course was supplemented with other materials, including slides, tapes, filmstrips, films and teacher-developed materials. Of major importance in the program is a specifically designed large-group classroom using electronic response equipment. Each of 100 students is able to respond directly to the instructor. The equipment also includes a computer for constant student-teacher evaluation. This teacher-developed programmed-learning center is under continuing revision. It is frequently used by other disciplines as well.

During the project--A double-block single-semester interdisciplinary program, coupling social studies and English, was developed. The programs, as implemented, provided a two-hour block of time for the two subjects, allowing much wider use of community resources. Some progress was made also in developing a scope and sequence district-wide for the social studies program. A complete reversal in curriculum design was developed early in the project. It is a program entitled ESCAPE (Experimental Schools Curriculum Adventure in the Pacific Environment). This was an extended-year program designed to acquaint students with natural and cultural environments of the Pacific Northwest. The program used an interdisciplinary approach (science, social studies, recreation). Field trips of 20 days duration were conducted, with students camping at various sites around the state.

2. MATHEMATICS

In the beginning--The school offered a traditional program of mathematics, including the SMSG-developed curriculum in grades 7 and 8 and a general math program for eighth graders. Ninth graders could elect to take algebra if they desired.

During the project--The major change taking place as a result of the project was in the creation of an individualized general mathematics program for grades 7, 8 and 9. Faced with high cost commercial programs or programs not specifically designed for junior high school--yet being confronted with students coming from elementary schools where individualized programs like Individually Prescribed Instruction (IPI) were being conducted, the Keithley mathematics faculty developed a Mathematics Activity Package individualized laboratory program. The program used a wide variety of materials coupled with pre- and post-testing, following an initial diagnostic evaluation. Over the years, the staff made a number of refinements in the program. These involved the development of additional mathematics activity packages, including several for elementary grade levels that are used with students who are far below grade level in their achievement. Changes also were made in scoring procedures and in the basic facilities.

3. COMMUNICATIONS

In the beginning--A basic program of language was offered. The seventh grade curriculum had two components: (1) language arts, consisting of spelling, grammar and composition; (2) reading, using word attack skills, vocabulary and comprehension. Grade eight combined English grammar and literature. The ninth grade program again stressed grammar and expanded literature to short stories, novels and composition. In addition, the school offered elective programs in drama, speech, journalism and three different foreign languages: Spanish, German and French.

During the project--A major program implemented during this time was the Craig Reading Program. This individualized program provides for diagnostic testing of each student and placement within a scope and sequence according to his reading ability. The total reading program emphasizes vocabulary, comprehension and reading speed. It makes use of a machine upon which slides are exposed on a screen by a moving light line. The Craig program has a wide range of materials for all reading levels. The program is similar to that installed at Franklin Pierce High School several years before under another project.

An Innovative Sciences, Inc. (ISI) program called THINK helped ninth grade students who were scoring well below grade level in language arts.

In addition, the school synchronized the use of a number of other materials, including Science Research Associates (SRA), Hoffman and Imperial tapes, mostly for use with students demonstrating marked reading deficiencies.

Some high intensive courses were introduced during the interim, including Ashland, Oregon, Shakespeare, intercultural education, perception games and memory skills, stage musical, speed reading and writing for publication.

4. SCIENCE

In the beginning--The basic curriculum consisted of a general science course in the seventh and eighth grades. Ninth graders could select either a physical science course in physics and chemistry or the ESCP (Earth Science Curriculum Project) earth science program. The teaching strategy of the general science courses was mostly student-laboratory. The program for the physical and biological science classes used also a large-group classroom equipped with individualized response electronic units, a computer-based scoring and retrieval system and audio-visual equipment (see section on social studies above). The earth science curriculum was developed in the early 1960s under the sponsorship of the American Geological Institute. Keithley was one of the five West Coast pilot schools that assessed and validated the program.

During the project--Some seventh grade science classes moved into using the ISCS (Intermediate Science Curriculum Study) program. Individualized materials for use by the students was developed and refined by the staff. They also developed some intensive interim courses, including oceanography, meteorology and geology (part of the ESCAPE program). A Sea Lab course originally designed to be operated with Franklin Pierce High School turned out to not be workable, so much of the material and concepts were integrated into the interim course in oceanography.

5. PERSONAL DEVELOPMENT

In the beginning--Traditional courses in physical education and health, general art, general music, chorus, band and orchestra were offered students.

During the project--A wide variety of special interest courses were added to the school's curriculum during the interim. These included such courses as band ensemble, boys cooking, ceramic-pottery, hobbies, knitting and crocheting, leather, bowling, golf instruction, gymnastics, physical fitness, archery, ice skating, roller skating, skiing, swimming, macrame', motorcycle operations-maintenance and safety, photography, personal sewing, steelhead fishing, stringboard art and textile design.

6. CAREER EDUCATION

In the beginning--Only two career education areas were available to students. These were typing and shop programs in woods, metals and mechanical drawing.

During the project--The most significant change during the project came in the industrial arts area when Keithley became one of the three pilot schools to test and validate Occupational Versatility. The program, which has been given national attention, is an individualized shop program which advances student creativity and responsibility, with the teacher as a helper in the learning process. At Keithley the program, which includes its own management system, was implemented with the following areas: hot metals (including forging and welding), cold metals, wood, plastics (including injection system and molding techniques), graphic arts, power mechanics, electronics, electricity, crafts and the world of construction. As a part of the latter, shop students built a shop addition to house a new area for fiberglassing. The program also includes its own occupational information center. The shop program, which has some 90 students and three instructors in a large open area, is available to girls and boys alike. In addition to interim courses that have career applications (like photography, automotive maintenance and oceanography), cross-age tutoring was developed to the point of being the most significant part of the junior high work experience program. Work opportunities for junior high students are not so plentiful, so cross-age tutoring--junior high students tutor elementary students--becomes a work-learning experience. A high-risk, stay-in-school program also was developed for use at the school. It involved field studies of industry and business as well as hands-on learning in vocational agriculture, horticulture and tree farming.

FRANKLIN PIERCE HIGH SCHOOL

First constructed in 1952, the school now houses students in grades 10-12. The campus style building occupies a 40-acre site which includes a 3,000 seat football stadium and two large paved parking lots. The school provides instruction in some areas for students from Washington High School. An original non-project school. Enrollment in 1973-74: 900.

1. SOCIAL STUDIES

In the beginning--The generally standard courses required by the state were offered to the students. These included Washington State History, United States History and Government I and II, and Contemporary World History and Problems I and II. Nevertheless, through earlier work by the staff, all the courses were operated under the interdisciplinary multi-media approach. The courses, which use a variety of printed and audio-visual material, were based on a conceptual framework developed sequentially.

During the project--A variety of alternative social studies courses, all meeting state requirements for high school students, were developed and offered to students. The courses include Contemporary World Problems for television; Contemporary World Problems (population, third world or problem areas); World Studies (religions, cultures or geography); American Studies. One resut of the development of the above alternative courses was reaching a goal of an integrated curriculum. In addition, teacher training was accomplished for courses in Contemporary World Problems for television and in economics.

2. MATHEMATICS

In the beginning--For students who elect to take more mathematics in high school, the traditional offerings were available. These included elementary algebra, geometry, intermediate algebra, trigonometry, advanced algebra and elementary functions. For students who wanted a more practical approach to mathematics, other courses were available, including Refresher Math (individualized), Consumer Math (business oriented) and Applied Mathematics (problem solving). Most of the courses were traditional in approach and use of materials.

During the project--A major impact on district curriculum was the Survival Skills Program developed and implemented at Franklin Pierce High School. The program includes individualized learning packages in the areas of whole numbers, rational numbers (fractions), decimal fractions, measurement, ratio and proportion and per cent. Several forms of a survival skills test also were developed and administered once or twice a year to each student. Successful achievement on the test is a requirement for graduation. As a result of the success of the test program, a similar survival skills program began to be developed for use with seventh grade students. At the end of the project, that program was still in the pilot stage. In addition, an individualized math laboratory was installed, where students can work on math problems, using manipulative materials, make use of electronic calculators and obtain assistance from a teacher, aide or student assistants. A series of vocationally oriented math activity packages also were developed to help students learn math related to specific occupations.

3. COMMUNICATIONS

In the beginning--A basic sophomore English program provided a year's instruction in language, grammar and literature. An elective program provided a variety of other courses, including Survey of American Literature, Survey of English Literature, 20th Century American Literature, 20th Century English Literature, Classical Literature, Speech, Drama, Journalism, and Reading Development. In addition, students could elect foreign language courses in German, Spanish and French.

During the project--A Sophomore Humanities Program was developed that provided for a variety of language experiences for students that would be coupled with a structured assessment technique for determining student weaknesses. Students then were assigned to areas where they needed the most instruction: reading, basic language, literature. The successful program followed two years of development and training by the language arts teachers, all of whom participated in the team approach to sophomore language. Other elective courses were revamped somewhat also.

4. SCIENCE

In the beginning--A basic science curriculum provided courses in BSCS Biology, chemistry and physics. For students who had difficulty with biology, an activity-oriented course called IIS (Ideas and Investigations in Science) Biology was offered.

During the project--An individualized team teaching approach to general biology was developed and implemented. It included two teachers and 60 students. Students worked independently or in small groups in the laboratory. A small resource room also was used and small discussion sessions operated for different students each day. The program was dropped after two years because of a lack of interest on the part of students.

5. PERSONAL DEVELOPMENT

In the beginning--A traditional mixture of courses were offered in music (chorus and band), art (painting, drawing and crafts), physical education (required sophomore level and advanced for boys and for girls). Before entering the project, the school began an Interim program which offered a variety of personal development courses through a wide range of interest areas.

During the project--Interim courses continued to be developed and modified during this time in response to both teacher and student interests.

6. CAREER EDUCATION

In the beginning--Several basic courses were available as were one or two more innovative approaches. Included in the courses being offered were woodshop, metals, electronics, mechanical drawing, engineering drawing, agriculture, horticulture, forestry, typing, shorthand, business mathematics, office machines, cooking, sewing and tailoring. A Technical Interdisciplinary Program offered a two year class for those interested in the construction trades. It provided a four-hour-a-day program in basic carpentry, mathematics and communication skills related to the building trades.

During the project--Several major innovations in occupational areas occurred during the project. The Occupational Versatility concept in the junior high school was modified for the high school, and the wood, metal and mechanical drawing shops were integrated into the OV mode. A two-year development process provided the individualized learning activity package program for the high school. The electronics program was individualized also, and a sea education program was begun that provided instruction in seamanship, boat design, marine propulsion, boat handling and navigation. In the business area, a simulated office program was successfully inaugurated, with students functioning in all areas of a modern insurance business.

7. OTHER

Before the school entered the project it began an Interim program. Based upon the experience of the district's other high school, the program was offered in January the first two years. After that it moved to May, the school reporting the move to be a successful one.

WASHINGTON HIGH SCHOOL

A fairly traditional high school housing grades 10-12. Constructed in 1969, the school includes five classroom buildings, a resource center building, a field house, a cafeteria/multi-purpose building, and an office building. The campus style school is organized into departments serving English, social studies, mathematics, science and business education. Three of the classroom buildings have large-group instruction centers. An original project school. Enrollment in 1973-74: 950.

1. SOCIAL STUDIES

In the beginning--A basic social studies program was in operation in the school. It included courses in Washington State History and Government, Man and Ideas, United States History and Government and Contemporary World Problems. These courses used basic textbook materials, supplementary reading materials, library and audio-visual resources and outside speakers as well as occasional field trips. An inquiry and problem-solving approach was used by teachers in many of the courses.

During the project--Early in the project the school began offering Contemporary World Problems over educational television so students could take the course at home if they desired, coupled with at-school conferences. A large-group area received the installation of electronic response system and United States History was modified to use the system for large-group instruction. Interim programs and course outlines were developed in Greece/Italy Study Tour, Drug Education, Prescribed Social Studies, Recreational Ecology, Indians of the Puget Sound Basin, Human Behavior and Mental Health Work Experience, and Westward Expansion: A History of the American Frontier. Later most social studies programs in the high school were integrated into a master system that provided for unified goals, objectives, procedures and evaluation methods. A provision was initiated that allowed students to take part in independent elective study in the social studies area. Television recording equipment was purchased to increase the availability of television programming related to social studies. A special viewing area also was provided for students.

2. MATHEMATICS

In the beginning--The school offered several mathematics courses, including standard algebra and geometry. Both general math and advanced math for seniors were available too. In addition, geometry also was offered as a laboratory course. Most courses operated with a standard textbook, plus some teacher-developed materials.

During the project--A quick trig class was dveloped for use during the interims. An individualized program called ASIST was implemented, mostly for students who were having difficulty with regular math classes. It involves the use of learning activity packages. A program of business and technical mathematics was developed and implemented. Learning activity packages were developed for quick trig, applied math, advanced algebra and advanced senior math. A math-science multi-media center was developed and operates in preliminary fashion. It offers audio-visual supplement to individualized instruction.

3. COMMUNICATIONS

In the beginning--A basic sophomore English course was available. It included literature, grammar and composition for a full year. Juniors were required to take a semester of American Survey of Literature. In addition, juniors could take vocational English. A number of elective semester courses also were available: Humanities, Speech, Debate, Drama, Modern American Novel, Contemporary Fiction, Reading for Growth and Development, Creative Writing, Advanced Research and Graphic Arts.

During the project--Prescribed English was formulated for use during the interims. Designed for students who do not complete minimum requirements during the regular semester, the course consists of special materials to help the student in his particular area of weakness. A Craig reading program was installed to assist students to correct their reading deficiencies. It operated both in conjunction with regular English classes and Prescribed English in the interim. A variety of learning activity packages and a theme reader program were put into use. Several advances were made toward the development of a comprehensive English Management System.

4. SCIENCE

In the beginning--A traditional science program was offered to the students. It included programs in BSCS Biology, Chem. Study Chemistry, PSSC Physics and advanced organic chemistry. Basic texts, materials and science laboratory equipment was available.

During the project--The school implemented a four-semester course in basic electronics. In addition general physics course was put into operation. Both of these were developed as individualized continuous progress courses utilizing learning activity packages. An alternative science program for low ability students, General Laboratory Science, was implemented. It employed activity skill cards to present individual experimental topics. Comparative anatomy and ecology of Washington State were individualized advanced biology courses put into the curriculum.

photography, glass blowing and wildlife biology were added to the interim slate of courses. Photography later was modified to be integrated into the regular semester. As a part of the total program, the mathematics and science staff developed a center for individualized instruction and supplementary audio-visual materials. Basic development was completed on a student tracking and reporting system.

5. PERSONAL DEVELOPMENT

In the beginning--Traditional courses in music, art and physical education were offered students. Music classes included both choral and band, while the art program also included some crafts. Physical education was restricted primarily to sophomores except for one advanced class.

During the project--A number of alternative courses were offered during the interims: child development nursery school, girls' athletics, psycho-cybernetics, golf and archery, drug education, aerobics and pottery. The pottery class involved the installation of a complete ceramics facility.

6. CAREER EDUCATION

In the beginning--The school originally offered courses in intermediate and advanced woodshop, carpentry, architectural design, typing, shorthand, office machines, bookkeeping, office procedures, cooking and sewing.

During the project--A plastics and fiberglassing class was added to the industrial arts section early in the project. Also a co-ed woodshop and a technical drawing class were added. Later the entire area was revamped as part of the high school model of Occupational Versatility, which was developed by the district staff and implemented in both high schools. The OV program provided for more individualized work by students and offered them a wider variety of experiences. A program of work experience for all students was instituted, with a work counselor handling all coordination, placement and evaluations. Under the program, each student was required to obtain some type of on-the-job work experience before he graduated. During the interims, other classes were added in knit and stretch sewing, decorating and upholstery.

7. OTHER

During the project--Some additional personnel helped implement changes brought about by the project. These included an assistant principal whose duties included the coordination of interim and clerical and instructional aide assistance. The school also was able to put into operation a closed-circuit television distribution system, which operated for a time with student-produced and network taped programming.

SUPPORT ELEMENTS

TRAINING

A summary of the training of personnel that took place during the project.

Because of the emphasis during the project on the development and implementation of a wide variety of curriculum programs, project planners foresaw a need for training of teachers, para-professionals and administrators. Originally, training for teachers was to have occurred through the auspices of Pacific Lutheran University. However, when that plan failed to develop, the district took on its own training programs. During the first 30 months of the project 54 separate training sessions were held. These covered a wide variety of curriculum and teaching strategy areas. Details of that training appeared in the narrative report covering that phase of the project.

With the change in scope of the project during the second 30 months, the training took a somewhat different direction. First of all, a director of training was appointed to plan and oversee the varous training programs. Training was to have three major thrusts: (1) the training of project administrators in the area of decision-making, (2) the training of teachers and aides in utilizing new educational programs and in working in a restructured school environment, and (3) the training of volunteers to work as partners in the educational setting.

More specifically, most training during the 30 months was sorted according to program streams, except for that related to administrative and volunteer areas. Such training was designed to develop and implement new curriculum and to train personnel in the project's new schools in the use of curriculum programs which would be implemented in those schools.

Much training of teachers and aides and all the training of individual volunteers took place within the specific schools. Little record has been maintained of such training, though it constituted a large share of the instruction that took place during the project. Nevertheless, some 50 individual training sessions were held during the second 30 months of the ESP project.

The following is a summary of the district-wide training held during the second phase of the ESP project:

A. Social Studies

1. Seminar on use of Harcourt Brace Concepts and Values program
2. Workshop on People and Technology implementation
3. Workshop and instruction on Man, A Course of Study (MACOS)
4. Workshop on People and Technology
5. Consultant seminar on People and Technology
6. People and Technology teacher workshop to share teaching ideas, developments and solutions to common problems
7. Seminar on thinking strategies for social studies teachers

B. Communications

1. Implementation workshop for Criterion Reading Assessment and Tracking System
2. Basic instructional workshop in Hawaii English Program
3. Instruction in the use of the Franklin Pierce Communication Goals Skills program
4. Workshop in IPI Reading
5. Secondary school communications planning and development seminar

6. Development of vocational English materials
7. Workshop on Communication Goals development and implementation
8. Evaluation workshop on Communication Goals system
9. Workshop to prepare testing materials for Communications Goals system
10. ISI language programs workshop for junior high school teachers and aides
11. Workshop to develop criterion-referenced test materials and update goals in the Communication Goals system
12. Teacher-conducted workshop on materials and implementation of Hawaii English Program (HEP)
13. Workshop on use of new materials in language arts
14. Workshop on Communications Goals system revisions and new test materials

C. MATHEMATICS

1. Workshop on implementation of Franklin Pierce Mathematics Management and Support System (FPMMSS)
2. Secondary mathematics survival skills program development session
3. Teacher-conducted mini-math conference to assist in implementation of FPMMSS
4. Evaluation workshop on FPMMSS
5. Development workshop for test materials and metric objectives for FPMMSS
6. Math workshop in using teacher-developed materials and in developing a basic survival skills package for elementary students

7. Demonstration of student use of the FPMMSS materials
8. Demonstrations of new techniques and procedures related to FPMMSS
9. Workshop on the teaching of metrics
10. Workshop on revisions to the FPMMSS, including the games and activities book

D. SCIENCE

1. Elementary science workshop on implementation of ESS science program
2. Grade level workshops in ESS science
3. Workshop to correlate ESS units and to prepare behavioral
4. Explanation of new elementary science guides
5. Meetings to explain the K-6 science system developed by teachers

E. PERSONAL DEVELOPMENT

1. Workshop on operation of arts and crafts centers
2. Pullman P.E. program workshop
3. Workshop to develop Personal Development courses in health, social studies and science
4. Grace C. Nash initial implementation workshop
5. Updating workshop on Grace C. Nash program
6. Workshop to review, reinforce and extend philosophies relating to the Grace C. Nash program
7. Third phase of Grace C. Nash workshop

F. CAREER EDUCATION

1. General seminar on career education program
2. Project WAVE, a vocational education workshop for K-12 teachers

G. MISCELLANEOUS

1. Seminar on curriculum planning
2. Instruction in management by objectives for principals and other administrators
3. Management seminar for administrators
4. Workshop on teaching of CEMREL program of aesthetics
5. Workshop on CEMREL aesthetics program materials

EVALUATION

A summary of evaluation accomplishments. A complete evaluation report is the subject of a separate document.

Throughout the life of the project, the internal (Level I) evaluation has had three major goals:

1. To provide the superintendent and the school board with accurate information about the progress and effectiveness of the programs undertaken by the project.
2. To set up and operate a program monitoring process that will provide teaching staff and district administrators with information needed to aid in decision making.
3. To accumulate and periodically report to federal sources appropriate data relating to the progress of the program toward it objectives.

To accomplish these goals, a variety of procedures were developed, a staff was formed and data storage and retrieval equipment was obtained. As the project progressed, changes were made in the procedures and in the kinds of information collected. Essentially, however, most of the data collection was involved in these areas:

a. Student achievement
b. Student attitudes
c. Staff attitudes

While the details of the results of the evaluation effort are the subject of a separate evaluation report, the following listings of preliminary reports suggests the broad range of evalualtion activity during the years of the project:

A. General Plans, Calendars of Events, Etc.

September 1971	Level I Evaluation Plan and Calendar of Events
January 1972	Evaluation Plan
1973	Level I Evaluation Plan and Calendar of Events
1973	Level I Evaluation Plan and Calendar of Events (revised)
June 1973	Level I Evaluation Plan and Calendar of Events (revised)
April 1976	Paper Prepared for Distribution in Conjunction with the 1976 AERA Symposium Presentation: Internal Evaluation in the Experimental Schools Project

B. General Project Progress

January 1974	Evaluation Report (First Thirty Months)
April 1974	Evaluation Progress Report - January-March 1974

C. Interim

May 1974	Interim Questionnaire - Keithley
November 1974	January 1974 Interim
December 1974	HEP Student Attitude Surveys 1974-75
April 1975	May 1974 Interim
July 1975	The Effects of a January Interim on Student Achievement in Language Arts and Arithmetic
September 1975	1975 Winter Interim, Keithley-Washington

D. Objectives

October 1971	Evaluation Progress Report (Objectives)
April 1972	Evaluation Report (Objectives)
February 1973	Evaluation Progress Report (Objectives and Staff Attitudes)

December 1973	Status Report ESP Objectives by Schools

E. CTBS

October 1972	Evaluation Progress Report (CTBS, Student Affective)
October 1974	Graphic Results of Four Administrations of the CTBS - By School
October 1974	Longitudinal Analyses of Four Administrations of the CTBS - By School
June 1975	Analysis by Grade Level - Elementary School 1975 CTBS Scores - to Ability

F. Staff Attitudes

October 1972	Evaluation Progress Report (CTBS, Student Affective)
February 1973	Evaluation Progress Report (Objectives and Staff Attitudes)
May 1973	Evaluation Report (Staff Attitudes)
September 1973	Evaluation Report (Staff Attitudes)
September 1973	Evaluation Report (Staff Attitudes)
December 1973	Evaluation Report (Staff Attitudes)
January 1974	Survey of Elmhurst Teachers Opinions
March 1974	Evaluation Report-Certificated Staff Attitude survey Across Six Administrations
April 1974	Evaluation Report-Elementary Courses Staff Attitudes, Fall 1973 Administration
June 1974	Secondary Staff Survey-Attitude Toward Courses Taught - May 1974
July 1974	Staff Attitude Survey - Spring, 1974 Administration

G. Student Affective

December 1974	HEP Student Attitude Surveys 1974-75
July 1974	Staff Attitude Survey - 7 Administrations Over Time - has not been completed
October 1975	Summary Results of the Spring, 1975 Elementary School Affective Testing
October 1975	An Analysis of Secondary School Student Attitudes Toward Their Courses--Spring, 1975

H. ESP Impact on Curriculum

December 1975	An Assessment of the Impact of the Experimental Schools Project on Curriculum and Instruction in the Franklin Pierce Senior High Schools
January 1976	An Assessment of the Impact of the Experimental Schools Project on Curriculum and Instruction in the Franklin Pierce Junior High Schools
May 1976	An Assessment of the Impact of the Experimental Schools Project on Curriculum and Instruction in the Franklin Pierce School District

I. High Risk

June 1976	The Effect of the Experimental Schools Project in Reducing the Proportions of High Risk Students in the Franklin Pierce SChool District

J. Transient Student

June 1976	The Effect of the Experimental Schools Project on the Achievement of Migrating Students

K. Training

January 1974	Grace Nash "Approach of Expressive Arts"
April 1974	Mini-Math Conference

August 1974	Report on HEP - Mid Training Survey
October 1974	Report on HEP - Inservice Training Workshop (Summer, 1974 - Elmhurst)
May 1975	Expressive Art Workshop, Phase II October 14-18, 1974

L. CSST - (Math)

December 1974	Analyses of the Mathematics CSST Test Scores

M. Grace Nash Implementation

October 1975	Does Implementation of the Grace Nash Music Program Enhance Student Attitudes Toward Music?

N. Instructional Characteristics Profile

January 1976	The Nature of Instruction at the Franklin Pierce Senior High Schools: Feedback on the Instructional Characteristics Profile
February 1976	On the Relationship Between Instructional Characteristics and Student Attitudes Toward Courses
April 1976	The Nature of Instruction at the Franklin Pierce Junior High Schools: Feedback on the Instructional Characteristics Profile
May 1976	The Nature of Instruction at the Franklin Pierce Elementary Schools: Feedback on the Instructional Characteristics Profile
May 1976	Patterns of Instructional Characteristics in the Franklin Pierce School District Across Four Grade Levels and Four Subject Areas

COMMUNITY INVOLVEMENT

A discussion of the manner and scope of involvement in the project by members of the community.

One of the objectives of the Experimental Schools Project was to increase the amount of community involvement in the Franklin Pierce schools. During the first phase of the project, a district-wide charrette was held twice, complete with evaluation of the results. However, principals--and quite a number of parents--expressed the feeling that more effective communication would occur if parents were working only with their schools. Therefore, the charrette concept was dropped and parent groups at the individual schools were formed.

The establishment of the Parent Advisory Councils--originally begun as a result of requirements connected with Title I funding for some of the district's schools--was a year-long process. Piloted in some half-dozen of the schools, the PACs were successful enough for the concept to be adopted by other principals. By early in the second phase of the ESP project, all schools in the district had in operation a Parent Advisory Council. In addition, a district-wide PAC was formed with representatives from each of the school PACs.

The result of the formation and operation of PACs was an increased voice by parents in the operation of the schools and the development of various programs. While the PACs were required to meet certain requirements in Title I schools, in all buildings they expanded their interests into many phases of curriculum and operation. In general, the PACs:

--supplied information about the views of parents and children about unmet educational needs.

--recommended general plans for allocating ESP funds in their particular schools

--helped develop proposals designed to bridge the gap between pupil needs and the school's curriculum

--heard complaints about programs and made recommendations to correct any problems

--assisted with the annual evaluation of educational programs

Membership in the PACs changed somewhat each year, but parent volunteers filled vancancies. Occasionally principals would resort to sending letters to parents seeking members, but this strategy mostly was used only when the groups were first organized. Later there was little need to recruit new members; several parents interested in being members usually made themselves known to the principals.

Most of the PACs met monthly and maintained simple records of their meetings, though these seldom were distributed outside the school. The district PAC also met several times a year for more general discussions.

While no specific evaluations were made of the form or extent of community involvement during the second phase of the project, comments by principals and others were made occasionally indicating that basic communication needs were being met. Principals expressed satisfaction with the PAC concept. No negative remarks by school officials or parents were heard by project leaders. The PACs continued to operate following the end of the ESP project.

DISSEMINATION

A discussion of what was done to tell staff, community and educators about the project.

Originally envisioned as a major undertaking involving literally thousands of visitors and using a closed-circuit television system for both visitor information and teacher training, the dissemination role in the ESP project gradually shrank throughout its life. During the first 30 months of the project, delays were met in installing the television and in hiring a person to fill the position of disseminator. Eventually, the decision was made to abandon the television system and use district, instead of Pacific Lutheran University, printing and office facilities. While the number of visitors probably actually reached beyond 1,000, most of them found their way directly to the schools.

Throughout the state and country, printed material describing the project was sent. In addition, various means were used to communicate locally. In brief, during the first 30 months nine single-topic brochures were published, six narrated slide presentations were prepared, a 30 minute videotape was done, a 30-minute film was made, and a 40-page booklet about the project was published. In addition, articles were published in various media and speeches and audio-visual presentations were made to a variety of groups.

While the general intent of the dissemination program was to continue during the second half of the project, NIE officials specifically declared that emphasis should be upon local communication at the expense of out-of-district materials. In addition, the disseminator position was reduced to half-time, and he was given additional responsibilities as an assistant to the Program Cabinet.

As a direct result of the NIE direction, the following dissemination activities were completed during the second 30 months:

a. A 20-page booklet was published to describe various aspects of the project. Included were such topics as a definition of ESP, success, alternatives, career education, self-image, intensive education, training, building use, volunteers, community involvement, cost-efficiency, dissemination and evaluation. This booklet was sent to many other school districts, was given to visitors at all schools, was distributed at parent meetings throughout the district and was provided to newspaper and broadcast media personnel.

b. A four-page brochure was written and published to describe the district's philosophy of providing an alternative education for each child, one of the primary directions established early in the ESP project. This brochure was distributed primarily to visitors and to those requesting information on alternative education.

c. A revised narrated slide presentation on the ESP project was prepared for showing to visitors and other groups.

d. A narrated slide presentation on alternative education was prepared and shown for a state curriculum organization. The audience was estimated at 150. The presentation also was shown two or three other times to various other groups.

e. "Your FP Schools", a 16-page booklet describing the Franklin Pierce school system, included a major section dealing with the ESP project. It was distributed primarily to parents new to the school district.

f. Each spring summer interim brochures were prepared and distributed to the homes of nearly every student in the district. The brochures described the course alternatives available during the summer interim. Separate brochures were provided for elementary and secondary students.

g. A two-page flyer was prepared on the district's Grace C. Nash program. It described the philosophy of the program and how it operates in the district. It received wide distribution to music personnel through a national conference. Visitors interested in the program also received copies.

h. Two publications were developed and printed for Elmhurst's Communication stream individualized program. One four-page publication briefly described the various components of the Hawaii English Program and pictured various Elmhurst children using the HEP materials. The other booklet contained 36 pages of detailed description of the operation of the program. Both materials received rather wide distribution. Elmhurst parents and other schools in the project received copies, but most of the several hundred copies went to interested teachers and administrators in other school districts.

i. A detailed eight-page brochure was written and published to describe the district's extensive efforts toward the development of a Planned Programmed Budget Evaluation System. Distribution was primarily to the few hundred people from outside the district who expressed a particular interest in the subject.

j. Each summer a separate Interim brochure was published to describe the ESCAPE program for junior high students. This brochure was distributed to all students in the seventh through ninth grades.

k. A total of 12 issues of the "Views," a four-page district newletter to the community, were issued. Contained in these publications were the following specific articles regarding the ESP project:

a. Preview of the second 30 months of the project.

b. A feature on the Sophomore Humanities program developed with ESP funds.

c. A story about the role of the principals on the Program Cabinet.

d. A picture of students and one of their projects in a People and Technology class.

e. Pictures of activities during an elementary interim.

f. Pictures of in-service workshop for elementary teachers in mathematics.

g. An article describing activities during the first 30 months of the project.

h. A picture of activities in Midland's arts and crafts center.

i. Article and pictures about Elmhurst's Hawaii English Program.

j. Article and pictures describing People and Technology Program.

k. Article about experimental interim program to be conducted in May.

l. Description of the mathematics survival skills program.

m. An article asking for community involvement in helping to set directions for the district following the completion of the ESP project.

n. A student-written poem from the Hawaii English Program.

o. Several pictures showing school directors visiting the Hawaii English Program.

    p. An article about the summer interim.

    q. Pictures of teachers taking part in a mathematics workshop on metrics.

    r. An article about the ESP project's impact on the district's curriculum.

    s. An article describing the development of the source book for course evaluation.

    t. An article about the development of the district's math game book.

l. A staff bulletin is published once or twice a month. During the second phase of the ESP project, 48 issues of the two-page publication were distributed to all employees. Those issues contained a total of 110 references to the project or some component of it. This bulletin is a primary means of communication between the district administrators and employees. It is in its 23rd year.

m. Information about the project and its various activities received some notice outside the district as a matter of routine. Local daily and weekly newspapers from time to time carried articles and/or pictures on such project-related topics as survival skills math, MACOS, regular and summer interims, work experience, an analysis of ESP and the report of the first 30-months of ESP. In addition, the general impact of the project was discussed in Compass, a publication of the Washington State School Directors Association. The Hawaii English Program as operated in the project was the subject of items in both the Individualized Learning Letter and the booklet, Profiles of Innovative Projects in Washington.

PROJECT ACCOMPLISHMENTS

CURRICULUM DEVELOPMENT

A description of the plan for the development of curriculum by teachers.

Curriculum programs in schools come from two different sources, publishers and the school itself. Publishers frequently take advantage of curriculum programs developed in individual school districts, but mostly they commission university professors or others to write textbooks and other materials.

But what is a school system to do when no published materials are acceptable? It develops its own. That's what the Franklin Pierce School District did when it began massive efforts toward individualization and alternative education as part of the Experimental Schools Project. It's difficult to count all curriculum developed during the project, simply because many items are still in a developmental stage. It is enough to say that several curriculum systems and many, many specific courses were conceived and developed by the Franklin Pierce staff. It is the process by which all this occurred that is of concern here.

The Franklin Pierce district does not have subject specialists in curriculum. At one time--during four of the five years of the ESP project--two curriculum directors functioned one for elementary and one for secondary. Some people dislike the division between the two levels, but for practical purposes, it has worked the best.

Curriculum development at the elementary level evolved over a period of time when teachers discovered at the beginning of the ESP project that curriculum programs which would meet the requirements of the district were not available commercially. Teacher committees, usually chaired by the elementary curriculum director, were formed in those areas considered deficient. Each elementary school was represented on the committees.

After deciding what they wanted the program to be able to do, the teachers on the committee began an exhaustive study of the materials available from commercial sources as well as from other districts. In some cases, this study involved visiting schools where particular programs were operating to see how they worked. The value of this preliminary study is two-fold: (1) the committee members are assured that no program exists which can meet its requirements and (2) those aspects of programs which might be incorporated into a new program are readily identified.

Only at this stage does curriculum development, per se, actually begin. It is the committee's job now to develop program goals and objectives and to design the actual curriculum program. The process is a slow one.

Development of goals and objectives is a process conducted by the committee. However, each teacher on the committee also must hold meetings in his school to discuss with his fellow teachers what has been done and to obtain their reactions and suggestions. If the committee, at any point of development, feels a need for more expert assistance, a consultant is hired.

Consultants have come from universities, the office of the state Superintendent of Public Instruction, other school districts, textbook publishers or private firms. Consultants may fill one or more of several roles: they may conduct workshops to teach committee members how to write objectives or perform other tasks related to curriculum development; they may advise the group in its endeavors. In some cases, they may actually prepare a preliminary draft of some phase of the program. Always, of course, their work is under the direction of the committee.

While the process appears rather simple at this point, no words can adequately describe the time and effort devoted to the activity by the teachers. The countless hours of discussion, writing, rewriting, testing, rewriting and more testing are seldom recorded.

One must understand, of course,that this process involves district-wide endeavors. The complex management systems associated with individualized curriculum programs are not developed easily. Individual teachers or small groups with similar interests might more easily develop course outlines and the like. But district-wide curriculum development take much time and effort.

For example, elementary teachers spent some four years in developing the Franklin Pierce Mathematics Management and Support System. It consists of a manual of objectives and correlations with some 23 different basic and supplementary math programs. A teacher-created games and activities book of some 500 pages also is avilable. The system includes student tracking and reporting systems as well. The entire project occupied a dozen teachers for more than four years to develop, test and begin to implement the system. It obviously was a major undertaking. Similar efforts in language arts and social studies were made by other teacher groups using the same general process.

Similar efforts have occurred at the secondary level. Some differences in procedures were evident there, however. For example, the development process is spearheaded primarily by department heads, and, of course, the teacher groups are much smaller. Sometimes only two teachers work on a district-wide program, because the district has only two junior high schools and two high schools. But all teachers who may eventually use the program are involved in making suggestions and testing the materials.

Secondary curriculum-development groups also have access to consultants, can visit other districts to see programs in action and have access to all similar programs on the market.

The basic process for developing curriculum programs with district personnel is diagrammed in Figure 1. The diagram provides a flow chart of activities and decisions necessary to any developmental process in curriculum. What is not shown in the diagram is the leadership available to the teachers.

As mentioned earlier, a curriculum director or subject-area specialist might provide the leadership necessary to the group of teachers. This district has found two other ways of providing leadership.

Through a concentrated curriculum development process over a four-year period, many teachers in the district became, in a sense, subject-area specialists. They proved to be extremely helpful in working with other teachers in the development process and in training teachers in the implementation of new programs. Districts can readily make use of teacher-experts already on their staffs if they have no curriculum administrators.

Another interesting leadership aspect was developed by this district. Each of the elementary principals was assigned to a specific curriculum area. It was felt that principals, working together as a cabinet to oversee curriculum in the district, should be relatively expert in at least one particular area. Most princpals express an interest in a subject. Leadership of teacher curriculum-development groups by principals provides a simple means of group coordination.

The additional aspect of cost of curriculum development by a district's teachers needs to be considered. If curriculum development is expected to succeed, district administrators must be aware that such a process takes a long time and that it is necessary to provide for continuity in the group.

Curriculum Development

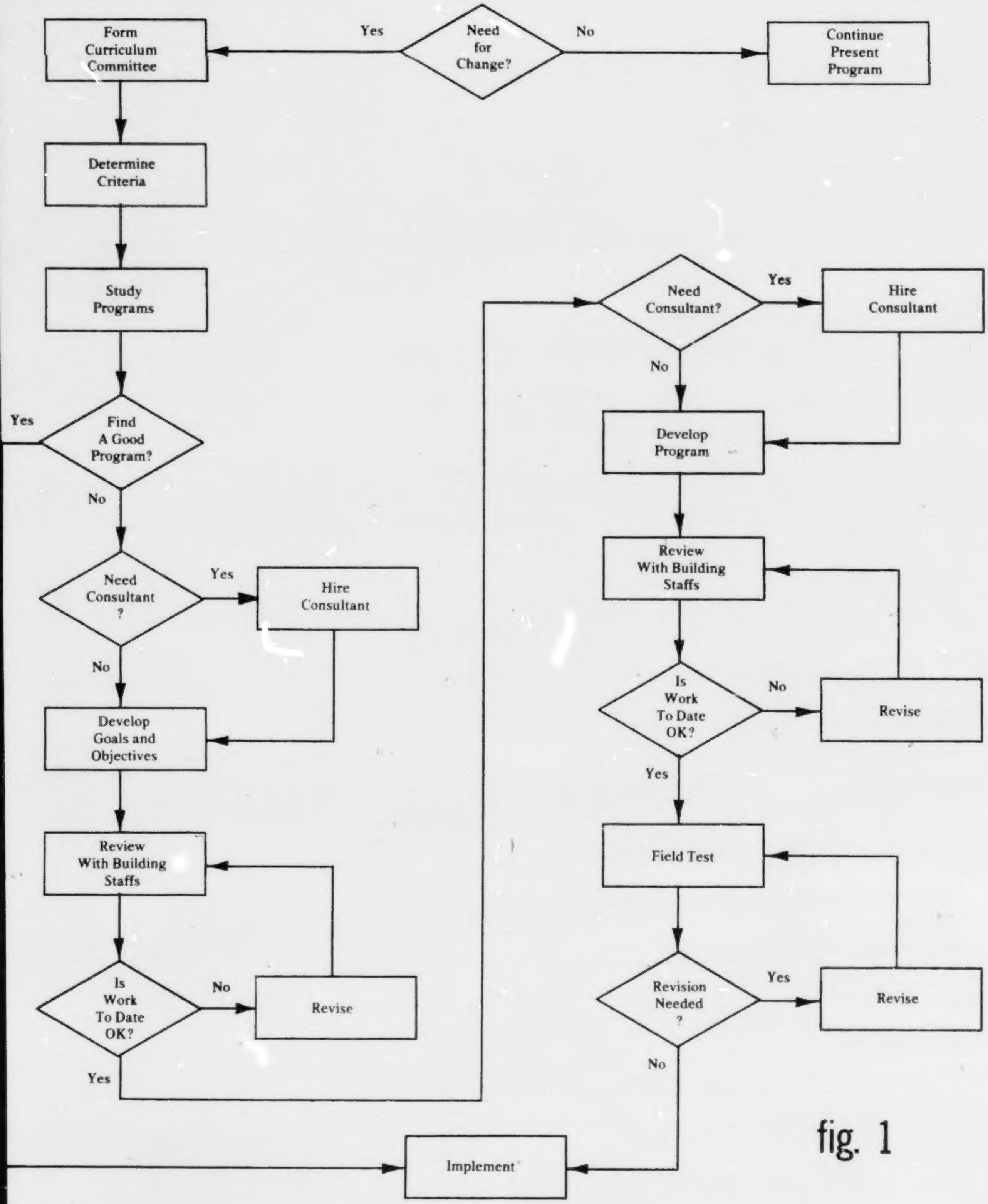


fig. 1

For this reason, teachers who spend additional time in curriculum development should be paid. It is not infrequent that such groups have to work on a Saturday or during one or two weeks in the summer. They should be compensated for such time.

Consultants, of course, are costly. Fortunately they are only needed to provide expertise. Much less costly teacher can do much of the actual developmental work. When the process reaches the reviewing and testing stages, costs will increase for the duplication of materials. Of course, publishing costs will be considerable more when materials are ready for implementation.

It has been the experience in the district that teacher-developed curriculum is more readily acceptable than commercially prepared material that may "come down from above." It also has been found that while teachers are willing to work on curriculum improvement and development, some compensation based upon their extra time devoted to such work makes them much more willing to spend the time and effort needed.

Teacher-developed curriculum, whether it be a mini-course or a complete textbook or individualized management system, is possible for a district willing to spend the money and the time necessary.

THE SCHOOL YEAR

The length of the school year was modified to provide a wider choice of programs by students. A discussion of the plan and how it was received by student, staff and parents.

In recent years many school districts across the country have modified the length of the school year, most lengthening it. Their main purpose was to ease overcrowding caused by rapidly growing enrollments. The use of existing buildings for a longer period of time was seen as a solution to the problem.

A similar extension of the school year occurred in the Franklin Pierce School District as part of the Experimental Schools Project, but its purpose--as well as its structure--was different.

No overcrowding or lack of building space existed in the district; in fact, the opposite was true as enrollment began to decrease in the early 1970s. But a change in the school year was seen as a way to provide more choices to students and to parents. Such choices included a broad range of classes not normally offered during the regular school year. The plan also provided for a choice as to when a student would attend school.

Called an Interim, the extended school year plan was devised on what its originators called a 4-1-4-1-1 model. The numbers represent months of the school year: four months of a regular semester, one month of an interim, four months of a regular semester, one month of an interim, one month for curriculum development with both students and teachers. On the basis of days of school, the plan looked like this:

regular semester	80 days	September-December
interim	20 days	January
regular semester	80 days	February-June
interim	20 days	June-July
curriculum	20 days	July-August
	220 days	

The concept allows students to choose any combination of these attendance periods to equal the state-mandated 180-day school year. This means attending both regular semesters, but getting a choice of which interim period to attend.

In theory, a student might take his vacation in January, but attend school during June and July. This would allow for extended vacations during the regular Christmas holidays and beyond, especially valuable for families who like to travel in the winter, who like to take vacations in ski country or for those who cannot get time off in the summer.

In practice, however, most students choose to go to school in January, the traditional approach, though many also chose to attend in the summer as well. An early survey of student and parent attitudes showed an overwhelmingly positive attitude toward the concept of the interim, but a contradictory feeling that summer vacations ought not to be tampered with.

Therefore, the concept of the interim as a vehicle for providing students with a choice about when they attend school did not turn out to be very practical in the face of tradition.

Another facet of the original plan--the curriculum development period--also met with some problems. Designed as a period when teachers and a small group of students could plan together new curriculum programs and test new curriculum practices due to be implemented, the period functioned only briefly the first years of the project. While the idea was never actually criticized, practical implications of the plan caused it to be rejected.

First of all, August turned out to be a period when students were reluctant to attend school, particularly when they had no real choice of class content as they did in other interim periods. Students, despite what some may say, are not "turned on" about developing their own curriculum. Teachers also found it extremely difficult to know how to work with students in curriculum, and they found the period of time too short to adequately test any curriculum innovations.

Because of the problems faced during the curriculum development interim, that phase of the plan eventually was dropped. The plan now became, for practical purposes, a 4-1-4-1. Even that, however, was modified to meet existing situations.

Because of the traditional Christmas holidays, the 80-day fall semester frequently becomes a few days longer and the spring semester a few days shorter than the idealistic 80 days. At the junior high school teachers concerned over the reduction in time spent in the basic classes caused the interim there to be reduced to 15 days, thereby lengthening the spring semester five days longer than in the high school. The same 20-day/15-day interim concept existed for the summer interim.

Because of inclement weather during the winter, which effectively limited some of the outdoor courses it was felt desirable to offer during the interim, a junior and a senior high school piloted a variation of the basic interim model by shifting the 15- or 20-day period from January to May. The experiment was deemed a success.

Teachers and administrators cited as advantages to the May interim that the traditionally upsetting factors of the end of the school year were not present. End-of-year tests, anxiety over the approaching summer vacation, a sudden flood of sunny weather all were eliminated or put to benefit of the students. By the end of the year, most seniors have completed all their requirements for graduation. Many, therefore, choose not to attend the interim. This non-attendance of seniors--about 50 per cent of the class--reduces the student load and allows more flexibility in the classes, according to interim administrators. Teachers agree that the May interim is an excellent way of "winding down the year."

The idea of the interim was not well-received by elementary school personnel, however. One school piloted a program in the interim, but it did not last more than two or three years. They changed the interim concept to place the 15-day option period in September, their rationale being that September weather in the Northwest was perhaps some of the best for vacations.

The school's first experience with the idea was reported to be very successful, except only a few families took advantage of the opportunity it afforded. From the viewpoint of the teachers, it was successful because they had time to get acquainted with their new students before they began the basic year. Many of the teachers used the interim time for field trip experiences.

Later, because of the transportation problem involved with most of the teachers taking field trips, various learning centers and school-located activity courses were offered.

Other elementary schools later tried an Interim in May, but they did not continue it. Most of the problems with the interim in the elementary school seemed to revolve around the interruption with instruction in the basics of reading and mathematics. Teachers felt that they needed to spend all the time possible in basic instruction.

An alternative was developed in the elementary schools which has been much more successful. At that level, the schools opted for the Fifth Day approach, which amounts to nothing more than spreading the interim out over a 20-week period, one day a week.

In theory, one day a week, traditionally on Friday, a different kind of curriculum is offered to students. The students can choose from a variety of courses and activities, all of which are built on student interests.

In practice, schools could not devote a total of 36 days a year to such activity, so the number of days was reduced. In most cases, the time spent on such courses during the fifth day also was reduced by about two hours, so each student could still obtain instruction in reading and mathematics. Other variations were tried, with the most successful being a form in which the school provided an arts and crafts center where whole classes were together and where an instructional assistant managed the center. There the students could learn a variety of skills and take part in many hands-on type of activities. Many times these activities were designed to correlate with studies occurring in the regular classroom.

Thus, the Fifth Day concept was developed in the elementary schools as an alternative to the secondary-school interim.

The interim began as a 4-1-4-1-1. But time and experience with the program has modified the basic plan to a choice of two approaches: 4-1-4-1 or 4-4-1-1 (January or May interims).

It might be noted here that the summer interim has not changed, but has continued to be held yearly in June and July. While the three levels, elementary, junior high and high school, hold their summer interims separately, the elementary and junior high each limit theirs to a total of 15 days. The senior high continues with a 20-day interim.

Courses through the years have been developed for a variety of reasons. Teachers have developed courses on the basis of those things they are interested in and feel qualified to teach. Students have expressed interests in sufficient numbers to require the school to develop courses to satisfy them and to find the teachers to instruct them. All schools that operate an interim offer what amounts to review or make-up classes in the basic subjects. In some cases students who are doing poorly in basic subjects are encouraged to enroll in at least one review interim class. In other cases, students who receive a failing grade in a required course in high school during the regular semester are required to take the course again in the make-up interim class.

Each of the schools provides other differences in the interim courses. For example, one high school has only half-day or whole-day classes. The other offers one, two, three or six-hour classes. Most junior high classes are two or three hours, with only a few lasting all day. Most summer interim classes are two or three hours in length.

One of the advantages cited for the half-day and all-day classes is the ability of the students as a group to travel off the campus without jeopardizing their other classes. These travel classes have in the past meant statewide, national and international study tours, two-and-three-day field trips, and classes in boating, sailing, scuba diving and the like, which require locations off the campus.

The tremendous variety in classes and the wide range of experiences available for students during the interim is evidenced in the following courses actually offered by one or more schools in the district:

HIGH SCHOOL

Adventures in Needle Crafts
Advertising
Aerial Navigation
Aerobics
Antiques and Northwest History
Anything You Want to Be
Bachelor Survival
Band Workshop
Basic Life Skills
Batik and Crewel Design
Bible as Literature
Boutique Sewing
Chess and Other Selected Games
Clerical Practice
Co-Ed Recreation
College Prep English
Contemporary Music Projects
Conversational Norwegian
Dance: Creative Movement
Fund with Fiberglass Reinforced Plastics
Furniture & Antique Refinishing & Home Repairs
Girls Shop
Glassworking
Human Behavior and Mental Health
Introduction to Business
Introduction to Flight Training
Living with Death
Make-up English

JUNIOR HIGH

Agriculture
Community Resources
Computer Calculator
Cross Age Teaching
English Review Festive Foreign Foods
Fiberglass Construction
Habla Espanol
Law Enforcement
Math Enrichment
Math Lab
Math Review
Meals in Minutes
Non-Traditional Jobs
Occupational Versatility
Oceanography
Reading Development
Recreational Reading
Scandinavian Culture
Speed Reading
Stage Musical
Theatre Arts - Puppetry
Typing
Vacation
Work Experience
Writing for Publication
Yummy Yeast Breads
Ceramics
Hobbies
Knitting and Crocheting

Make-up Math
Make-up P.E.
Make-up Social Studies
Mime: The Silent Art, The Universal Language
Model Rocketry
Nuclear Chemistry
Occupational Versatility
Orientation to Athletics
Photography
Positive Mental Attitude
Poster Construction (Calligraphy)
Pottery
Quick Trig
Quick Calculus - Special Projects in Physics
Racquet Sports and Sports Medicine
Reading Development
Russian Life and Culture
Roaring 20's and the Crash
The Secretary on the Job
Skiing and First Aid
A Taste of Spanish Culture
Survey of American Literature
Survival Training
Swimming and First Aid
Traffice Safety Education
Television Productions
The Verdict Is
Washington State History and Government
Weight Training and Conditioning
Wildlife Biology
Work Study
Advanced Scuba Diving in Hawaii
Antique Car Restoration
Auto Mechanics for Girls
Bacteriology
Beginning Bridge
Beginning Debate
Black Studies
Business Skills
Chinese Cooking
Classical Music Appreciation
Crime & Detection
Foreign Language Introduction
Fundamentals of Muisc Theory and Composition
Graphic Arts Workshop
How to Win at Scrabble
Improving your Penmanship
Introduction to Electric Typing
Organic Chemistry
Radio Broadcasting
Rifles, Shotguns & Archery
Sailing
Leather
Macrame
Oil Painting
Photography
Sewing
Stitchery & Needlepoint
Things & Creation
"Unclothing" Sewing
All Sports
Bowling
Fly-tying
Golf Instruction
Hunting & Camping
Motorcycles
Physical Fitness
Sailing
Self-defense (Judo, Ect.)
Skiing
Steelhead fishing
Swimming
Team Sports - Girls
Animal Clinic I
Band
Books, Libraries and You
Community Resources
Field Sciences
Health
Introductory Seamanship
Music Class - Voice
Music - Musical Production & Staging
Photography
Players of Invention
Poetry
Reading
Speed Reading
Beachcraft
Creations
Headstart Sewing
Kit Construction
Oil Painting
Patchwork Decorating
Wood Carving
Wood Shop
Basketball, etc.
Bicycling
Cheerleading
Field & Water Sports
Hiking & Backpacking
Firearm Safety
Tennis, Beginning
Wrestling & Body Conditioning

Science Make-up
Tennis Anyone?
10-Speed Bicycling
The City in Time - Tacoma Today
The Computer
The Good Life U.S.A.
Weight Lifting for Girls

The length of the school year has been modified in the interim plan, but the significant aspect of the program is the wide range of high-interest classes available for students. Results of surveys of student, teacher and parent attitudes toward the interim have been generally to highly positive over a several-year period.

For example, in one survey students said they found the interim to be a generally positive experience. Compared to the regular school year, the interim was described as a period when students found teachers more easy to get along with. They also said the interim was more fun, less difficult and more active than the regular semester. In another survey, students were asked to rank the classes on the amount of effort required in them, how useful they are and how much interest they have in them. While the results varied some by category, very few of the classes were rated unfavorably, even though some fell within the lower third of the ranking.

The interim, as a plan to offer alternatives to students through a modification of the school year, has been in operation in the district's schools in various forms for several years, getting its inaugural implementation three years before the beginning of the Experimental Schools Project. During all that time, it has received only plaudits.

The interim works. The students like it, their parents like it, the teachers like it, the school administrators like it. What else can be said?

MANAGEMENT AND ADMINISTRATION

A discussion of the development of a unique management team made up of principals and called a Program Cabinet.

A unique management concept grew out of the Experimental Schools Project. Its evolution over three and a half years resulted in a large savings in project administrative costs and brought about a new concept in school administration.

It was always the thinking of project designers that out-of-district personnel were not necessary to run the project. However, it soon became apparent that one person could not really be a director of the project and carry out his regular duties as well. One of the major obstacles to a one-person directorship was the spreading out of the key elements of the project into the schools. The principals in each of the project schools actually were having more to say about the operation of the project than the director.

These two circumstances led to the formation of a cabinet made up of the principals themselves to oversee the general operation of the project. Details of the project's budget were being handled by a competent classified person. The project disseminator was assigned parttime to assist the cabinet in its administrative role.

While the principals--nine elementary, two junior high and two senior high--retained their traditional roles of building managers, they also banded together as a Program Cabinet, a group acting as a single administrator to oversee the district's educational program.

The concept of the principals in a school district becoming managers of the educational program is built upon the premise that the principals have a better knowledge of the educational program than any other administrator because they are involved with it on a daily, front-line basis.

for the educational program can most effectively coordinate and oversee all efforts made toward the development and operation of the best program for the children.

On an organizational basis, the cabinet falls between the central office administration and the level of support personnel, including curriculum specialists. In dealing with program, the cabinet reports directly to the superintendent and oversees generally the activity of support personnel. This is not to say, however, that support personnel do not continue to report on a day-to-day basis to a member of the superintendent's staff. It is to say that the general direction of the activity of support personnel meets with the approval of the cabinet.

The Program Cabinet selects a chairman from among its members to serve for one year. A staff assistant prepares agendas in coordination with the chairman, takes minutes of the meetings, handles reports and other paperwork for the group and acts as a resource person to gather information for the cabinet.

The cabinet meets once or twice a month, the meetings normally lasting two to three hours. Sometimes a general principals' meeting or meeting of secondary or elementary principals is scheduled for the hour after the cabinet meeting.

When the need arises, the cabinet may appoint some of its members to special-purpose committees. These committees may be augmented by support staff or teachers. In the case of teachers, the local education association is asked to appoint the members.

The cabinet's primary function is to administer the educational program of the district, reporting directly to the superintendent and coordinating all district and categorically funded programs and their support activities. This means that the cabinet must take steps to insure that a comprehensive educational program designed to meet district objectives is operating in all of the schools.

In connection with this general function, the cabinet approves all workshops, training activities and curriculum development activities on the part of teachers in the district. It also reviews and approves the priorities established for applying for categorically funded projects. And it approves and oversees budgets and program activities for special operational programs.

The cabinet has the responsibility to recommend to the superintendent, and the board of directors, changes, additions to and cancellations of district programs.

The cabinet may call upon various support personnel to provide it with information upon which it can make its decisions. These may include directors of elementary and secondary education, teacher training, program development, vocational education, federal projects and evaluation.

Because of their close association with curriculum, several of the principals have become coordinators for special programs. For example, individual principals coordinate district programs in Individually Prescribed Instruction, Criterion Reading, Wisconsin Design Reading, Pullman Physical Education, Occupational Versatility, Outdoor Education, the gifted, and leisure-time activities (swimming and bowling for elementary students).

Numerous advantages have been recognized by principals and others since the Franklin Pierce Program Cabinet began its operation four years ago. Certainly the district's principals have discovered an increase in communication, not only among themselves, but also between the principals and other administrative personnel of the district. Such improvement in communication has meant a smoother operation all around elimination of feelings of being left out. The principals also have gained a broad knowledge of the problems and successes in a wide range of matters affecting district operation. They consequently are better able to make decisions affecting their own schools as well as decisons affecting the district.

One of the advantages that is now being recognized is the gradual elimination of the artificial barriers that once existed between the elementary and secondary levels, both in regard to principals and to programs. A feeling of comprehensiveness is slowly developing throughout the district as a result of the close working together on common problems by all principals.

Action of the cabinet has brought about a practical means by which budgeting follows programs, because the principals are much more aware of the programs operating in the schools than are any other group of people, except the teachers themselves. In addition, there no longer are complaints from principals about programs going into their schools that they are unaware of and perhaps disapprove of.

The implementation of the cabinet concept in a district is not without its problems. While the development of the cabinet has been slow, its growth has not been hampered by serious problems. But problems have developed.

For example, it takes time for principals--or for any group of people--to learn to work together. Principals were used to essentially running their buildings--and leaving the rest of the decisions to someone else. And they did that mostly by themselves. With the cabinet concept, they needed to develop a feeling for the group. They needed time to learn to change their hats when they came to the cabinet meeting, to think of the district as a whole and not just of their individual schools.

The cabinet concept is a democratic one that could not exist with an autocratic superintendent. It is not easy for any person to give up his responsibility, to step aside and let someone else make the decisions, especially a group. But that is what is required if the cabinet is to be more than just an exercise.

It takes time to gain knowledge, too. A principal who is used to concentrating his thinking upon his own school is unable to immediately shift his sights to a district-wide scope. He must develop new habits and new thinking processes when he is a cabinet member.

And then there is the perennial problem--there isn't enough time. Principals feel that they must be in their buildings most of the time. Meetings draw them away from their work, and they resent it. However, principalsin the Franklin Pierce district have discovered that, while they must spend more time in cabinet meetings, their increased knowledge is making them more efficient and more able managers of their own schools.

Despite problems of time, inexperience and tradition, the Franklin Pierce Program Cabinet is working. With acceptance by the principals themselves, as well as by other district administrators, the cabinet has gradually assumed more responsibility for the educational program in the district. Thirteen princpals have become more knowledgeable about school programs and about their own district--and they are taking the action necessary to improve those programs.

COST-EFFECTIVENESS

A description of attempts to design a practical cost-effectiveness system for school district use and a look at the final result.

For several years school districts across the country have been attempting to develop systems to help administrators make decisions about school programs. Most of those attempts have been to build a Planned Program Budget Evaluation System (PPBES). Those attempts have been mostly unsuccessful.

The Franklin Pierce School District, as part of the Experimental Schools Project, also has made attempts in this area. After five year's of work, it appears that the district has finally created a tool that may be used to generate cost-effective information for making decisions about school programs.

One of the district's objectives in the ESP project was to develop a cost-effectiveness formula. Such a means for determining the cost and benefit of various programs is an essential part of all PPBES efforts. But there have been problems.

A PPBES system involves the development of goals and objectives for identified programs, a budget to meet those objectives and goals and an evaluation system to see how effective have been the efforts to reach those goals and objectives. In many cases it has been the evaluation system that has been lacking when it comes to specific curriculum programs in schools.

For example, a principal wants to know whether a new mathematics program he has implemented in his school is better than the program is replaced. Most school districts can't tell him with any degree of accuracy except through the judgment of the teacher.

Attempts by this district at building program budgets that would be useful in evaluation have been fraught with frustration. In 1971 a consultant prepared an ESP program budget format utilizing various project components, such as Individualized Education Programs, Diagnostic Teaching, Training, Administration and Evaluation. Unfortunately, the tracking system was overlapping and the use of district funds--along with project funds--was not possible to track. The system was discarded as being not very useful.

The next year an attempt was made to track costs by curriculum subject. This proved to be too cumbersome and provided only encumbered expenditures rather than actual expenditures.

A third attempt was to simplify the system to track expenditures by curriculum streams--social studies, communications, mathematics, science, personal development and career education. Again failure occurred because budget administrators were unable to adequately separate their expenditures by program stream. Many materials, paper for instance, are used by teachers in a variety of subject areas. To which stream does the budget administrator assign the cost of such materials?

At that point, the district was required by the state to shift to the state's version of program budgeting. While it is an improvement over what it replaced, it does not provide sufficiently detailed information so administrators can use it to make curriculum-related decisions.

Efforts by the Franklin Pierce district at this time shifted from the intricacies of PPBES to efforts to develop a practical tool for making decisions: A cost-effective matrix.

Such a tool links student growth data and educational cost data with program activities. Once a program activity has been specifically identified, the growth and cost data for it can be sorted out and plotted on a simple matrix to indicate the cost-effectiveness of that particular program activity.

The Franklin Pierce cost-effective model is incorporated in the district's Instructional Program Source Book. Contained in the book are two sheets of paper for each identifiable program activity. One is a

Course Information sheet which includes the name and number of a course, its history and development, a narrative description of it and a detailed instructional characteristics profile. The other is a Student Outcomes and Costs sheet which provides information about the average cost of the course, student growth in achievement and affective measures, and a cost-effective matrix that combines the cost and growth data.

The cost-effectiveness matrix (Figure 1) is a simple device for displaying the results of statistical analysis of the basic data so school administrators can make decisons. A simple plotting of the cost and student growth information tells decison-makers whether and by how much a course falls into one of four basic areas: (1) low cost, but low student achievement; (2) low cost and high student achievement; (3) high cost and low student achievement; (4) high cost, but high student achievement. Obviously, the second area indicates the most desirable program, while the third identifies the least desirable program.

The identification of each program is a cooperative effort between evaluators and teachers. Teachers originally were asked to describe the classes they teach. These were grouped by program stream, by grade level, and by whether they were the same as before the ESP project began or whether they had been changed because of the project. Then teachers were asked to check from a list of characteristics those that described the specific classes they were teaching. The characteristics included those dealing with student participation; individualization; teacher presentation of material; use of instructional assistants; use of learning resources; and maintenance of skills.

The results of this activity became the Course Information Sheet.

Cost data could then be collected for each identified program activity. At first, costs were limited to only teacher salaries, which represents more than 80 per cent of the total budget. Other costs representing fixed expenditures can be pro-rated among all the program activities, and unique costs related to a course can be added.

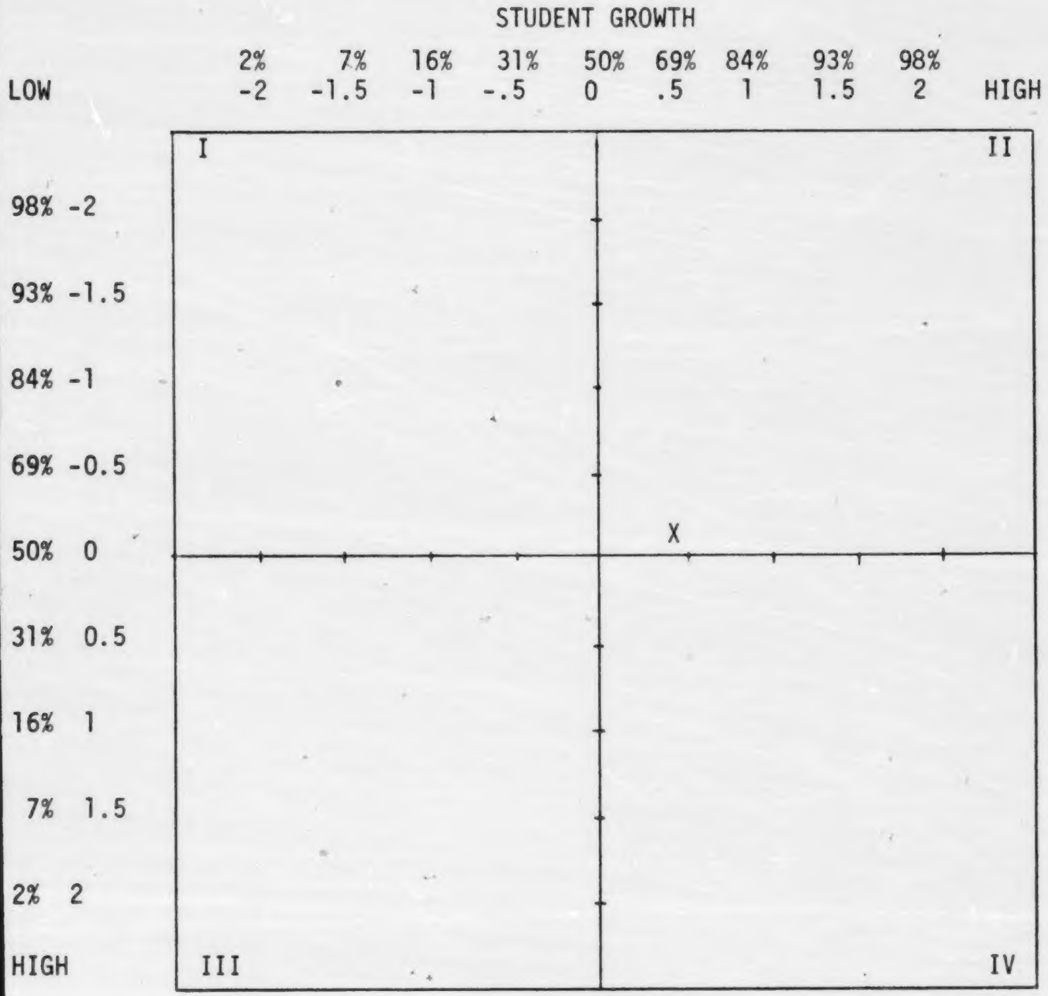
Student growth data in the Franklin Pierce district has come from a yearly administering of an achievement test (California Test of Basic Skills-CTBS) and the collecting of such affective data as a student's self-concept of his ability and his attitude toward the program activity being analyzed. The affective data was collected annually with the use of district-developed instruments.

The data is treated statistically to produce a comparable standardized index of cost and growth. These index figures are than plotted on the matrix.

The procedures generally include these:

1. Identify each of the instructional groups functioning in the district in each of the general curriculum areas.
2. Identify the students enrolled in each instructional group.
3. Accumulate relevant test measures on the students: two consecutive administrations of the CTBS and of affective instruments.
4. Calculate the mean scores for each instructional group for each measure.
5. Regress post-test means on pre-test means to generate student growth measures. From this regression equation, a predicted post-test mean can be generated. The difference between the predicted and actual post-test means is the measure of student growth.
6. Group the student growth measures according to the programs used. Develop a new mean (the sum of all growth scores in a given curriculum) for each program. These analyses also can be done

THE COST-EFFECTIVE MATRIX



I: Vacuous Programs
II: Most Preferred Programs
III: Least Preferred Programs
IV: Hard Decision Programs

fig. 2

separately by sex or grade.

7. Compute a cost factor for each program, based upon specific and pro-rated costs. Calculate the mean costs for each program.
8. Each specific program can now be located within the matrix, in which columns represent levels of student growth and rows represent levels of cost. Figure 1 is a sample of such a matrix.

Different matrices can be constructed for various measures. Decision-makers, for example, when viewing three matrices representing achievement, attitude and self-concept, can themselves assign weights to each measure. For example, is the program which generates high student growth in achievement, but low attitudes and self-concept, to be preferred to one which generates relatively low achievement, but high attitudes and self-concept?

Whatever decisions are made, the basic information is available in a simplified form to all decision-makers. The preparation of descriptive material related to this process is the subject of other publications. It is anticipated that most districts could obtain sufficient computer equipment to handle the necessary data analyses which are necessary in this process.